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ABSTRACT

An integrative review of literature on the causes and probable consequences of teacher stress is presented. The review is grounded on the assumptions that both positive and negative stress are an integral part of human experiences, varying across individuals, and can be best understood within the context of how individuals cope with it. Based on this review, the report moves to an analysis of the literature on stress in teaching, focusing on the work-related variables of student concerns and issues in administrative policy and practice. Literature on teacher stress is examined in relation to the broader body of literature on occupational stress in general. Emerging from the analysis as important issues are social support, role factors in the workplace, and person-environment fit. The consequences of stress are examined with reference to occupations in general and teaching in particular. Coping literature is analyzed, with particular reference to personal factors affecting coping. Personal resources and social support, particularly from co-workers, are reported as emerging as significant factors. The report concludes with observations and recommendations based on the analysis. (Author/JD)

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Stress and Coping among Teachers: Experience in Search of Theory and Science

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ABSTRACT

The report presents an integrative review of literature bearing on a comprehensive understanding of the causes and probable consequences of teacher stress. The review is grounded in several assumptions: (a) stress is an integral part of the human experience; (b) the perception and experience of stress are transactional in nature, and vary across individuals as a function of individual ecologies and time; (c) stress has both positive and negative qualities and consequences; (d) the experience of stress is best understood within the context of coping, i.e., the ways in which people deal adequately and effectively with stress.

Based on a brief review of the stress literature (yielding a definition of stress characterized by change, perception of threat,and response), the report moves to an analysis of the literature on stress in teaching. Largely experiential and anecdotal in nature, this literature focuses most heavily on the work-related variables of student concerns and issues in administrative policy and practice. Concerns at other levels of the teacher's ecology-- personal variables, family and social network variables, community variables-- receive relatively little mention. The teaching stress literature is examined in relation to the broader body of literature on occupational stress in general. Emerging as issues of particular importance are social support, role factors in the workplace, and person-environment fit.

The consequences of stress are examined with reference to occupations in general and teaching in particular. Although assuptions concerning the effects of teaching stress are prevalent, there is little direct, empirical evidence in this area.

The coping literature is then analysed, with particular reference to factors affecting coping: personal characteristics, personal skills and

abilities; personal social network factors; environmental factors and time. Coping with job-related stress--commonly perceived as a special case of coping--is examined. Personal resources and social support, particularly from co-workers, emerge as significant factors. Literature on coping behavior among teachers (again, largely descriptive and anecdotal) is analyzed.

The report concludes with observations and recommendations based on the analysis. All are oriented toward the derivation of a more theoretically-based and scientifically rigorous examination of stress and coping among teachers.

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Stress and Coping Among Teachers: Experience in Search of Theory and Science

The readers of contemporary journals for educators are hard-pressed to ignore the subject of stress in teaching. Teachers write of difficult conditions in the schools and offer suggestions for overcoming stress; administrators discuss the stress of bureaucratic roles and suggest ways of helping staff cope; professional organizations devote resources to the publication of books and pamphlets describing the causes, consequences and "cures" of teacher stress; and the popular press highlights findings on "burnout" in human service professions, a category that sometimes includes teachers.

In teaching as well as other professional fields, stress is an idea whose time clearly has come. In the four decades since Selye first published on the subject of stress, he noted the publication of over 120,000 articles dealing with the topic in medical, behavioral and philosophical science (Selye, 1979). And certainly medical and physiologically-oriented writing in the area of stress has been followed by numerous attempts to apply the concepts to diverse aspects of human functioning and behavior.

In the areas of work and occupational behavior, primary applications of stress theory and research centered first on jobs with consensually obvious difficulties or dangers: certain kinds of physical labor, jobs involving exposure to physically noxious conditions, jobs incorporating potentially life-threatening tasks. Gradually, more subtle conditions of employment came to light as potentially stressful, e.g., repetitive

work as on assembly lines, and jobs involving high levels of responsibility for others, as in managerial positions. And in the last decade, stress in human service occupations has come to the fore, as the hypotheses suggested by research in other occupations have been identified by persons in several professional fields as potentially powerful in explaining individual malaise or dissatisfaction with work in jobs traditionally considered high in status, desirability, or benefits. Thus, for example, a recent volume on stress in the professions (Cooper & Marshall, 1980) could attract considerable attention as it presented research findings and future needs related to the incidence and effects of stress in such diverse fields as dentistry, nursing, teaching, social work, engineering, and selected government careers.

That stress is perceived to exist and to have specific impacts on human functioning in many job situations thus has become a truism today. In a rush to understand poor productivity, job dissatisfaction, employee turnover, and a host of indicators reflecting organizational or individual unhappiness with job characteristics, demands, or performance, many authors have offered stress as the cause and stress reduction as the cure. This has certainly pertained in the field of education, where teacher stress has been called "epidemic" (Sparks, 1979; Swick & Hanley, 1980), teachers have been cited as being under "extreme pressures" (Bensky, Shaw, Gouse , Bates, Dixon & Beane, 1980), and stress has been called "a one-word definition of teaching" (Alschuler, 1980). These and similar observations have been offered in explanation of the disenchantment, anger and frustration that many teachers assert they are feeling in the continuing practice of their vocation.

As is true in many areas of scientific inquiry, personal observation and reports of experience often precede more systematic organization of knowledge and inquiry. Such is the case in the field of education, where a review of reports related to teacher stress immediately allows two observations. First, a great deal of attention is given in the literature for classroom professionals to the experience of stress and proposed cures. Second, this body of literature--largely experiential and anecdotal--has run far ahead of systematic and scientific address to the origins and consequences of teacher stress. Theory, conceptual work, and research methods available in the broader area of stress have been inadequately applied--with few exceptions--in the field of education. Descriptive reports of stressful circumstances in teaching abound, as do suggestions for their alleviation, but few reports offer theoretical understanding, knowledge derived from well-designed research, or plans for intervention based on firm conceptual ground and evaluative data.

Purpose of the Study

The purpose of this paper is to review literature from relevant disciplines that bears on a more comprehensive understanding of the causes and probable consequences of stress experienced by teachers. In pursuit of this goal, the paper examines information related to the occurrence and impact of stress and coping in human functioning in general, and examines relevant literature in the field of education in particular. Findings are analyzed with the purpose of strengthening the foundation for empirical inquiry, intervention and policy development in the area of teacher stress.

The plan of this study called for the examination of relevant literature from several different disciplines: education, health, psychology, medicine, sociology, and management. At the outset, a decision was made to limit consideration of the literature to published materials. Even after this decision, the literature included represents but a sample; efforts were made to draw from the most authoritative sources in several circumstances, but in no field of inquiry is the selection of resources reflected in this paper exhaustive. In all disciplines except education, efforts were made to limit consideration to more scholarly sources; in the field of education--in part because much of the discussion is experiential rather than scholarly and in part because a more comprehensive view of teachers' perceptions was desired--popular as well as scholarly sources were considered.

Assumptions

Throughout the paper, several assumptions based on theory and empirical findings come to the fore. They are highlighted here because they are central to the analyses and because they influence both the structure and orientation of the review.

First, it is assumed the occurrence and experience of stress are integral parts of the human experience. Although specific stressors and responses vary across individuals and groups, all people, in all occupations, experience stress.

Second, the perception and experience of stress are essentially transactional in nature. They vary across individuals and over time as a function of the individual and the individual's ecology, which includes

the personal social network of family, friends, neighbors and other acquaintances; the individual's involvement with the workplace as well as other institutions; and the individual's role and participation in the community.

Third, stress has both positive and negative qualities and consequences. While the focus of much current attention is the negative experience of stress, this experience must be understood with the knowledge that stress is an ubiquitous, necessary, and often positive aspect of human experience.

Fourth, the experience of stress must be understood within the context of coping -- the ways in which people deal with stressful conditions. Optimally, stressful situations are met by effective coping responses that lead at a minimum to the restoration of a sense of adequacy and more positively to the development of new skills and competence.

We turn now to an examination of the literature on stress, which includes consideration of theory, sources and correlates of stress in teaching, stress in relation to occupations in general, and stress in relation to its consequences. The discussion then moves to a consideration of coping, with a focus on theory, coping with occupational stress, and coping with teaching stress in particular. While the discussion is necessarily sequential, stress and coping are best understood as interdependent and interactive parts of human involvement in change.

Stress

Stress has been defined in many ways, witness the amount of writing on the topic. Although there are areas of disagreement over components and emphases, some specified definitional elements emerge as generally

agreed upon. Of primary importance is the observation that stress events and responses involve what can be called a transaction between an individual and the environment. The notion of transaction implies that qualities of the individual interact with qualities of the environment in a manner influenced by individual factors (e.g., age, development, skills, self-esteem, history), elements of the ecology (e.g., personal support system, qualities of the workplace, qualities of the community and national "ethos"), and characteristics of the potentially stressful event (e.g., its pleasantness, chronicity, ability to be controlled, presence as one of many stressors) (Cobb, 1974; Dohrenwend & Dohrenwend, 1974b; Lazarus & Launier, 1978; McGrath, 1970b, 1970c; Paykel, 1974; Pearlin, Lieberman, Menaghan & Mullan, 1981; Phillips & Lee, 1980; Rutter, 1981; Wolff, 1950). Further, the elements of the transaction and the transaction itself are dynamic over time. Thus, when considering the issues of stress in teaching, it is most useful to consider stress not as an isolable series of specific events held constant over individuals and time, but rather as a process involving dynamic and reciprocal interaction between qualities of the individual and qualities of the ecology as related to potentially stressful events.

There seems also to be general agreement that person-environment transactions that can be characterized as stressful or stress-producing involve three conditions: a change in some element of the environment, a perception of threat on the part of the individual involved, and a response action by the individual related to the change event.

The change implicit in stress has been conceptualized in several ways: problems, challenges, extenuating circumstances, difficulties and, simply, change itself (Appley & Trumbull, 1967; McGrath, 1970a; Sells,

1970). Most importantly, however, in almost all circumstances change in relation to stress implies demands--either external or internal--that alter homeostasis, the individual's status quo, or the individual's current state of being (Antonovsky, 1979; Baum, Singer & Baum, 1981; Selye, 1974). These demands require that individuals make adjustments, and these adjustments often require resources or responses not readily available or accessible within the individual's repertoire or environmental system (Lazarus & Cohen, 1977).

The perception of threat involved in a stressful event or response is also important. The perception of threat is generally related to one's self, one's abilities, one's standing or esteem (Baum, et al., 1981; Kyriacou & Sutcliffe, 1978; Pearlin, et al., 1981) and generally involves an assessment of the situation's demands in relation to one's resources (Lazarus & Cohen, 1977). The perception of threat is generally reflected in some degree of alarm (Selye, 1956), and is usually based on actual or anticipated change, physical or psychological injury or pain, disruption of social relationships, or deprivation (Appley & Trumbull, 1967; McGrath, 1970a). It must be emphasized that the perceptual or cognitive appraisal of a potentially stressful event is significant in determining whether it will be experienced as stressful by the individual (Kyriacou & Sutcliffe, 1978; Lazarus, 1966; Lazarus & Launier, 1978; McGrath, 1970c; Pearlin & Schooler, 1978; Rutter, 1981; Warburton, 1979). This appraisal may take place in two forms or stages: primary appraisal, when the individual assesses the negative or positive meaning of the event, and secondary appraisal, when the individual assesses the implications for his or her coping resources and responses (Lazarus, Averill, Opton, 1974; Lazarus & Launier, 1978). The

appraisal also takes place with reference to several other factors, alluded to in the discussion of stress as a transaction, which may include the individual's attitude toward the potentially stressful event, prior experience with it, knowledge of its probable consequences, and other individual characteristics (Baum, et al., 1981; Kyriacou & Sutcliffe, 1978; Rutter, 1981).

Finally, an event that is stressful or stress-producing involves a response by the individual, seen variously as resistance (Selye, 1956), the volitional expenditure of energy (Antonovsky, 1979), or coping mechanisms (Lazarus, 1966, 1967), which may include mobilizing to meet the demands of the situation, mobilizing to avoid the situation and its consequences, or moving to alter the perception of the demands, potential responses, or consequences of the situation (McGrath, 1970a; Sells, 1970). Alternatively, those responses can be seen as orienting the individual to modify the situation, control the meaning of the situation, or adjust the negative consequences of the situation once they have occurred (Pearlin & Schooler, 1978).

This work on definitional issues in stress leads to three additional observations of importance in understanding the occurrence and impact of stressful events in teaching. First, potentially stress-producing events are omnipresent in human life and an integral part of the human condition (Antonovsky, 1979: Pearlin & Schooler, 1978; Selye, 1974), witness, for example, Holmes and Rahe's (1967) much-used effort to identify and weigh life events that are commonly experienced and generally require adjustment and coping responses. Stress per se, therefore, is neither something to be avoided nor to be considered the unique province of any individual or

occupational group. Teachers, as any other occupational group, appropriately and of necessity experience stress in the course of personal and professional living. Certainly, however, specific stressors experienced may vary among groups as a function of individual and situational characteristics.

The second observation contradicts the frequent assumption that stress is bad and that all bad events are stressful. Stressors or potentially stressful events are not necessarily negative: the threat implicit in such events may be seen as challenging rather than debilitating (Baum, et al., 1981); positive consequences may accrue to the experience of stressful events particularly if new coping resources or skills are realized or developed (Antonovsky, 1979; Weiss, Ilgen, & Sharbaugh, 1982); and the coping responses associated with stress may include such pleasant and fulfilling experiences as self-expression and joy (Selye, 1974). The critical issue therefore is not the avoidance of a bad experience called stress, but rather the balancing of potentially stress-producing events with the use and development of coping resources and skills. Similarly, not all unpleasant feelings are included in the definition of stress (Pearlin & Schooler, 1978). Tension and anxiety, for example, are not synonymous with stress (Selye, 1974); stressors are specific, deriving from particular circumstances and having clear boundaries (Pearlin & Schooler, 1978), as defined in part by the elements of change, threat, and response. Further, specific changes or events vary in stressfulness (Dohrenwend & Dohrenwend, 1974a), and not all unpleasant events or stressors are likely to lead to similarly negative consequences for all individuals (Rutter, 1981).

A third observation, related to the transactional nature of experience of stress, is that sources of stress identified as job-related may emerge from several areas of the individual's life. Thus, qualities of the individual and elements of the individual's ecology--such as interpersonal relations with family and other social network members, situations in the workplace or in the community--may each lend weight to the perception and experience of work-related stress (Cooper & Marshall, 1976). Similarly, the experience of stress may be seen as deriving from characteristics of the environment (ecological variables) and from the response state of the individual (individual and personal variables) (Hinkle, 1974; Kyriacou & Sutcliffe, 1978). Thus, stress at work--or more specifically here, stress in teaching--may be seen as emerging not from the characteristics of the job, nor from qualities of the individual worker, but rather from the transaction between variables related to the individual, the individual's ecology, and the workplace. Alternatively framed, work-related stress that is experienced as negative may be seen as deriving from inadequacies in the "fit" between the person and the work environment (cf., French, Rodgers, & Cobb, 1974)--i.e., a poor match at any given time between the characteristics, needs, skills, and resources of the person and the characteristics, demands, and resources of the workplace (see also Needle, Griffin, Svendsen, and Barney, 1980).

Sources and Correlates of Stress in Teaching

We turn now to the literature recording the occurrence and experience of events perceived as stressful in the teaching profession. The literature base here is quite limited in nature, although not in

quantity. Many people have written about stress in teaching; unfortunately, very few have examined, systematically and empirically, the sources and correlates of stress experienced by educators. The literature is overwhelmingly experiential and anecdotal; with few notable exceptions, it constitutes a catalogue of difficulties and problems in teaching, with only minimal attempts to verify the stimulus events, the experience, or the consequences of stress in teaching. Even among empirical investigations, only a handful deal with the topic directly; others have been reviewed because they address an issue that may logically be construed as related to educators' experience of stress (e.g., faculty stability; teacher career change; absenteeism; job satisfaction). In general, those who have written of teacher stress seem as yet to be casting about for the beginnings of solid connections to theory, systematic empirical inquiry, and thoughtful intervention design. The findings reported here can be construed at best as exploratory and suggestive; rarely does a body of sound empirical data permit the conclusion that a given variable is in fact strongly implicated in most educators' experience of stress in teaching.

We follow in this analysis the ecological framework suggested in the earlier discussion of stress as a transaction between the individual and the environment, with an emphasis on the ecological context of human development (Bronfenbrenner, 1977) and stress (Trumbell, 1975). We examine the teacher stress literature with reference to individually-oriented variables, family and social network variables, variables related to the school as workplace and education as a profession, and, finally, variables related to the community and the broader social context of national attitudes and events.

Individually-oriented variables

Two types of individually-oriented variables have been mentioned in the teacher stress literature. The first group is related to the relatively dynamic factors of personality, expectations, and competence. Among those focusing on personality, ego needs and self-esteem in teachers have been cited as important (Styles & Cavanaugh, 1977; Swick & Hanley, 1980); teachers who have poor self-esteem or unmet ego needs are seen as more susceptible to school-based stressors. In a related area, certain personality characteristics--idealism, passivity, dedication, and some obsessional traits--were identified as characterizing a group of teachers who had experienced violence and physical threat on the job (Bloch, 1977, 1978). Kyriacou and Sutcliffe (1979) reported that locus of control was related to the experience of stress among a group of teachers; they found a significant correlation between external locus of control and self-reported incidence of stress. Teachers' expectations of the teaching role and what they will derive from it (Styles & Cavanaugh, 1977), the absence of clear role expectations (Bensky, et al., 1980), or overly ambitious expectations for the role (Pines, Aronson, & Kafry, 1981) have been mentioned as potentially important in the experience of stress, as have issues of personal and professional competence (Coates & Thoreson, 1976; Morris & Morris, 1980; Styles & Cavanaugh, 1977).

A body of related literature provides some interesting perspectives on these sources or correlates of stress in teaching. For example, the personality characteristics identified by Bloch (1977, 1978) as related to the experience of violence among teachers were among those identified by Jackson (1977) and Lortie (1975) as characterizing most teachers

(e.g., idealism, romanticism, dedication to students). Given commonality of important personality attributes among teachers as a group, variability in teachers' experience of stressful conditions is likely due, at least in part, to variation in environmental circumstances.

Understanding the personal characteristics of teachers as a group, however, may help explain the salience of some more environmentally-based stressors. For example, Jackson's (1977) observation that unrealistic expectations characterize many teachers--and Lortie's (1975) identification of many teachers as people who liked school as children, are committed to prevailing values, and feel that teaching is a worthwhile service--may help to explain the stress emerging for many teachers from a clash between their expectations and the realities of classroom life, student response, and community attitudes. Similarly, Lortie's (1975) and Jackson's (1977) discussions of endemic uncertainty among teachers may help explain the presence and potential power of doubts about professional competence as a stressor.

A second group of individually-oriented variables includes demographic characteristics, notably sex and socioeconomic status, which have been suggested as correlates of teacher stress. Gender has been suggested as an important variable in several respects; for example, teachers' job satisfaction (women teachers tend to be more satisfied than men [Chapman & Lowther, 1982; Cortis, 1973; Lortie, 1975]); teachers' "survival" in the job (variability in life cycle responsibilities may account for differential rates of job longevity [Charters, 1970]); teachers' experience of conflict between personal and professional roles (women teachers may

experience more role conflict or more stress than men because they often have more life role expectations to meet [cf., Dunlop, 1981; Lowenstein, 1980; Perun & Bielby, 1981; Pines, et al., 1981]).

Socioeconomic status has also been implicated as a variable of potential importance. Feldvebel (1968) observed that the occupation of teaching is viewed as an "upward step" for lower SES people, but a downward step for those from higher SES backgrounds. The status attractions of the teaching occupation for persons from different socioeconomic backgrounds thus may vary and may be implicated both in the likelihood of perceiving given teaching events as stressful and the sometimes related decision to stay in or leave teaching. In a related vein, Gosnell (1977) reported that teachers who had done blue-collar work before teaching tend to stay longer in the occupation than those whose previous work experience was not blue-collar.

While demographic characteristics may be implicated in some teachers' perceptions of and responses to potentially stressful events, it is important to note that those characteristics are often used to simplify more dynamic and multifaceted variables (e.g., multiple role demands; perceptions of professional opportunities). They are probably best used in efforts to understand teacher stress only with caution and with awareness of the variability and more powerful explanatory variables they may mask. This would seem especially important in light of findings that demographic variables sometimes do not distinguish between higher and lower levels of self-reported teacher stress (Kyriacou & Sutcliffe, 1977).

Family and personal social network variables

This area of the teacher's ecology has received only tangential attention in the literature. Bloland and Selby's (1980) review of literature in the related field of career change among secondary teachers identified the preference of a spouse or best friend as important to the decision to stay in or leave the profession. Needle, Griffin, and Svendsen (1981), who surveyed over 900 teachers, noted that disruptive events in one area of a teacher's life can affect other areas of his/her life (e.g., teaching and family relations are affected by issues in both areas); Swick and Hanley (1980) made a similar point. In a related vein, Pines, et al. (1981) discussed professional burnout in relation to parenthood and marriage.

Thus, relations between teachers' families and personal social network variables and their experience of stress on the job remain essentially unexplored. The lack of attention here is noteworthy, given (a) the probable conflict for many teachers between the various role demands they experience (e.g., parenting demands and teaching demands) and (b) the significance of personal social networks and support in human response to stress.

Work-related variables

While the individual and personal social network levels of the ecology may be construed as containing variables that influence perceptions of and responses to teaching stress, the workplace level of the ecology includes variables that are directly productive of job-related stress. Not surprisingly, the literature on stress in teaching has

focused primarily on issues within this category. As will be seen, most of the groupings presented below are labeled "concerns." This has been done intentionally, for although concerns are not synonymous with stressful events, much of the literature reflects fuzzy boundaries between teaching stressors and broadly construed categories of concerns, problems, difficulties and unpleasant conditions. Because all of the issues below emerge in discussions of teacher stress, they are represented in this review. The reader should bear in mind, however, that this collection of issues drawn from the literature reflects wide variation in conformity to more strictly construed definitions of stress based in the elements of change, perception of threat, and response.

Demands, conflicts, and ambiguities in the teaching role. Four different types of conflict have been identified most often. One relates to the clash between the demands and privileges commonly associated with professional functioning--such as autonomy, control over content and quality of service, freedom for creativity--and the demands and requirements of most school bureaucracies, such as the imposition of uniformity on content of instruction and scheduling, a focus on routines and supervision, etc. (Belok, 1965; Bloland & Selby, 1980; Phillips & Lee, 1980; Zahn, 1980). A second relates to the impact of discrepancies between an individual teacher's understanding of her/his role and the expectations that significant others, such as administrators or parents, may have for the role (Bensky, et al., 1980; Bridge, Cunningham, & Forsbach, 1978; Pettegrew & Wolf, 1982; Needle, et al., 1980; Swick & Hanley, 1980; Truch, 1980). Conflict may also emerge from discrepancies between career expectations developed during training and the realities of the actual

teaching job (Bloch, 1977; Purkerson, 1980). A third issue here is concerned with the conflicts between the role demand that teachers instruct and evaluate students and the frequently conflicting demand that they counsel and befriend students (Dedrick & Dishner, 1982; Dunham, 1976, 1980; Edgarton, 1977; Phillips & Lee, 1980). A final concern relates to ambiguities often inherent in the evaluation process in education (e.g., supervisors who evaluate with little or no reference to observation of teacher performance, and evaluations made on the basis of student achievement or behavior, two variables which may be related to factors other than teacher competence) (Dedrick & Dishner, 1982; Zahn, 1981).

More broadly-based considerations of teaching have also identified role conflict and role ambiguity as important variables. Tosi and Tosi (1970), for example, found that teachers' job satisfaction was negatively correlated with role ambiguity and role conflict. Jackson (1968, 1977) and Lortie (1975) indicated that ambiguity and uncertainty frequently characterize teachers' perceptions of their work. Pettegrew and Wolf (1982), however, drew more distinct definitions of role conflict and role ambiguity and found that role conflict--defined primarily as clashes between teachers and administrators or efforts to balance the needs of various constituencies--emerged as a relatively strong predictor of school stress, while role ambiguity did not. Ambiguities perhaps more often "work themselves out," at least in the short run. This is implied in Lortie's (1975) analysis that despite the likelihood of ambiguity in teaching (resulting from unsystematic training and unmediated entry into

the profession), most teachers derive fairly clear ideas about what they should do based largely on their intuition, 'common sense,' and personal history of experience as students.

A series of other job-related issues is also emphasized in the literature on stress in teaching. These focus on professional--and sometimes interpersonal--relations in the workplace and constitute clusters of concerns related to students, colleagues, and administrators.

Student-related concerns. Clearly heading the top of the list in frequency of discussion are concerns related to the discipline and behavior of students. The difficulty of disciplining students, unruly behavior, threats of violence, and the absence of respect from students, all emerge as issues worrying teachers or causing a host of other negative reactions (Bloch, 1977; 1978; Bloland & Selby, 1980; Cichon & Koff, 1980; Coates & Thoreson, 1976; Dunham, 1980; Farber & Miller, 1981; Fruth, Bredeson, & Kasten, 1982; Gentile & McMillan, 1980; Goodall & Brown, 1980; Johnson, Gold, & Vickers, 1982; Kyriacou, 1980b; Manera & Wright, 1981; Morris & Morris, 1980; National Education Association, 1981; Needle et al., 1980; Needle, et al., 1981; Pettegrew & Wolf, 1982; Phillips & Lee, 1980, Pines, et al., 1981; Sergiovanni, 1974; Swick & Hanley, 1980). Apart from discipline, other student-related issues are mentioned relatively infrequently: the range of abilities and individual differences with which teachers must deal (Dunham, 1976, Manera & Wright, 1981; Maples, 1980; Needle, et al., 1981, Olander & Farrell, 1970; Phillips & Lee, 1980); worries about children's achievement and learning (Morris & Morris, 1980; Pines, et al., 1981; Weiskopf, 1980); the demands of direct, frequent,

and intense contact with children (Swick & Hanley, 1980; Wieskopf, 1980; Zahn, 1980); and the development of individual education plans for students (Needle, et al., 1981). Student-related concerns may be especially salient for teachers working with low ability students (Sweeney, 1981) or low SES students (Becker, 1951-52). Similarly, Villeme & Hall (1980) indicated that level of students taught (elementary, secondary, special education) may be related to teacher attitudes.

Concerns about students may be particularly important in understanding some aspects of teacher stress, given the frequency with which teachers' enjoyment of children--and their need to be successful with students--emerge as factors in more broadly-based analyses of the teaching profession. Fruth, et al. (1982) and Lortie (1975) both found that enjoyment of teaching was cited by many teachers as a major reason for entering the field. Pines, et al., (1981) added that this liking of students is also manifest in a general commitment to "give oneself" to students, developing concern and empathy for their problems. Jackson (1977) observed that most teachers are intensely involved with their students; Swick and Hanley (1980) suggested that this involvement itself leads to a wish to "do everything," to teach all that needs to be taught and to reach all students (cf., Lortie, 1975). The involvement is related also to a concern about whether they are liked by students.

Teachers' investment in students is often complicated by two aspects of most teaching jobs: first, that most teachers--because of personal commitments and the structure of the occupation--derive their strongest rewards, motivations, and satisfactions from positive and successful relations with students (Bishop, 1977; Lortie, 1975); and second, that

teaching- by virtue of its task and structure--is permeated with doubt and uncertainty about the sources of student success or failure (Lortie, 1975). Rewards, thus, come from student outcomes (academic and interpersonal), but it is very difficult to know with certainty if the rewards that come--or their absence--are the result of one's own work and competence as a teacher.

Relations with students are thus complex and paradoxical for many teachers. It is not merely that teachers have concerns about student discipline, but also that relations with students are so primary in many teachers' views of themselves as professional successes or failures. Relations with students, and the core issue of student discipline, are issues around which teachers are probably most vulnerable. It is not surprising, then, that concerns about student behavior--and changes in student behavior across time or relative to teacher expectations--should emerge so strongly in discussions of stressors in teaching.

It is interesting and in keeping with one of Cichon and Koff's (1980) findings that concerns about the adequacy of instruction or teaching skills appear only tangentially in the discussion of stress in relation to student-based concerns. It is as if many teachers' concerns at some levels (and again, perhaps paradoxically) do not lie in questions about whether they can teach, but rather in questions as to whether students will be "teachable," the school supportive, and the necessary materials available (cf., Jackson, 1977).

Peer-related concerns. Set within the context of several observations that teaching is a lonely or isolated profession (Bishop, 1977; Farber & Miller, 1981; Jones & Emanuel, 1981; Lortie, 1975; Phillips & Lee, 1980; Sarason, 1971; Warren, 1975; Zahn, 1980), it is perhaps surprising that issues of collegial relationships emerge only infrequently in this literature. One of the few specific concerns cited is that teachers who impose their philosophy and techniques on others may create stress for their colleagues (Swick & Hanley, 1980); another is a concern that regular classroom teachers cannot accept handicapped students (Johnson, et al., 1982). More generally, the presence of peer respect and positive peer relationships have been mentioned as potentially important to teachers, and their absence, conversely, distressing (Bloland & Selby, 1980; Coates & Thoreson, 1976; Farber & Miller, 1981; Jones & Emanuel, 1981; Needle, et al., 1980; Zahn, 1980).

The absence of strong concerns about collegial relationships may result from the long-engrained isolation of the profession; it may also emerge from an occupation-wide preference for relative isolation (Lortie, 1969). Whatever its causes, the low level of concern here may render more difficult the implementation of the collegially-based strategies for coping that are suggested in the broader literature on occupational stress.

Concerns related to administrative practice and policy. Numerous and varied concerns emerge here. Among those that seem most closely related to building-level practice, complaints about having to spend too much time in non-teaching activities are legion; the specific offending

activities include clerical work, excessive record keeping, "demeaning duties," supervision of non-instructional activities, and meetings (Alschuler, 1980, Bloland & Selby, 1980; Dedrick & Dishner, 1982; Dillman, 1964; Dunham, 1980; Farber & Miller, 1981; Kleinert, 1968; Manera & Wright, 1981; Needle, et al., 1981; Phillips & Lee, 1980; Swick & Hanley, 1980; Weiskopf, 1980; Zahn, 1980). Poor administrative leadership at the building level is also cited often, whether related to (a) lack of administrative support for teachers, poor principal-teacher relations, and poor communication (Bloch, 1977; Bloland & Selby, 1980; Dedrick & Dishner, 1982; Gentile & McMillan, 1980; Hendrickson, 1979; Johnson, et al., 1982; Phillips & Lee, 1980; Swick & Hanley, 1980; Truch, 1980; Weiskopf, 1980), (b) administrative intrusions into teaching time and activities (Dedrick & Dishner, 1982; Swick & Hanley, 1980); (c) poor or inappropriate supervision (Dedrick & Dishner, 1982; Johnson, et al., 1982; Zahn, 1980), and (d) failure to create a sense of community in the school (Farber & Miller, 1981).

The significance of the quality of relationships between teachers and administrators is highlighted by Chapman and Lowther's (1982) work on job satisfaction. They found that positive recognition from administrators is strongly related to career satisfaction among teachers; such recognition may be particularly important, they suggested, given that external recognition and salary increases--as rewards for occupational performance--are often absent in the teaching profession.

At a level of responsibility shared between building and district-wide administrative policies, additional concerns emerge. One that rivals

in intensity the complaint about too many non-teaching requirements is concern with class size and student-teacher ratio (Bloch, 1977; Cichon & Koff, 1980; Dunham, 1976; Farber & Miller, 1981; Needle, et al., 1980; Phillips & Lee, 1980; Swick & Hanley, 1980; Weiskopf, 1980; Zahn, 1980). School size and faculty size have also been cited as issues related to teacher performance and satisfaction, smaller schools and faculties having more positive attributes (Abramowitz, 1976; Bloland & Selby, 1980; Bridges & Hallinan, 1978; Truch, 1980). Also at a level of shared responsibility are concerns with a lack of necessary materials, supplies, and resources (Maples, 1980; Phillips & Lee, 1980; Swick & Hanley, 1980; Zahn, 1980), absence of appropriate support services (Johnson, et al., 1982) concerns about work overload (Pettegrew & Wolf, 1982; Weiskopf, 1980; Zahn, 1980), and issues related to the absence of teacher participation in decision-making (Needle, et al., 1980; Phillips & Lee, 1980; Tosi & Tosi, 1970; Zahn, 1980).

Administrative concerns related to district-level policy and decision-making also emerge in the literature. Frequently mentioned is the issue of transfers, particularly involuntary, although the difficulty of getting transfers is also mentioned (Bloch, 1977; Cichon & Koff, 1980; Dunham, 1976; Farber & Miller, 1981; Phillips & Lee, 1980; Swick & Hanley, 1980). Complaints about low salaries also figure heavily in here (Alley, 1980; Bloland & Selby, 1980; Farber & Miller, 1981; Goodall & Brown, 1980; Needle, et al., 1980; Needle, et al., 1981; Swick & Hanley, 1980; Tosi & Tosi, 1970; Truch, 1980), as do concerns about contract negotiations, job security and fringe benefits (Needle, et al., 1980; Needle, et al., 1981; Swick & Hanley, 1980). Issues emerging sporadically are

variables related to poor physical facilities (Bloch, 1977; Cichon & Koff, 1980; Phillips & Lee, 1980; Swick & Hanley, 1980; Zahn, 1980), factors implicated in district reorganization (Dunham, 1976), and compliance with federal mandates concerning mainstreaming and the education of handicapped children (Bensky, et al., 1980).

Finally, the absence of adequate recognition for achievement (Kaiser, 1981), and the lack of opportunities for advancement in the school district or within the profession have also been mentioned (Bloland & Selby, 1980; Kaiser, 1981; Kleinert, 1968; Lipka & Goulet, 1979; Needle, et al., 1980; Ortiz, 1978). Issues in this area, well-described by Lortie (1975), may be quite salient in understanding teacher stress. The growing perception of being in a "dead-end" career--one having clear limitations on range of potential activities and clear ceilings on potential income, regardless of individual energy, expertise, or success--may well constitute a stressor, even (or especially) for "good" teachers in "good" positions. Even among teachers who accept the necessity of advancing in the profession by moving out of the classroom, career path issues may emerge as stressors, particularly for women, given evidence of discrepancies in proportions of men and women in supervisory positions (Foster & Carpenter, 1977) and the possibility of systematic biases against women who apply for advancement within school systems (e.g., Frasher, Frasher, & Wims, 1982). The absence of a career path in teaching may also foster attitudes and actions on the part of teachers who "stay" in the classroom that render them more prone to perceive situations as stressful and less effective in coping with them. Kanter (1978) identified several characteristics of low-opportunity jobs, which bear a striking resemblance to some of Lortie's (1975) description

of teaching as an occupation: "short ladders, low ceilings, very few options for movement into other jobs, infrequent promotions, little expectation that people will move onto better jobs, and no attention to training or skill development" (Kanter, 1978, p. 6). Kanter decribed the personal correlates of being in such position as including lowered aspirations, lower achievement motivation, lower self-esteem, undervaluation and devaluation of skills and abilities, and less commitment to the job and organization. People in low-opportunity jobs, if confronted with dissatisfying circumstances at work, are more likely than their high-opportunity counterparts to be passive, conservative and resistant, quick to complain but slow to make constructive suggestions for improvement. While Kanter's observations refer to jobs and occupational behavior in general, the parallels between her generalizations and some descriptions of teaching and teachers would seem to justify further attention to career opportunity issues in understanding and ameliorating teacher stress.

Variables Related to the Community

We turn now to a set of variables related to the community context of public education and teaching. Some pertain more directly to the local community, while others reflect more broadly-based national or social events and perceptions.

Local Community. Primary among the factors mentioned here is teachers' perception of diminished parent and community support for education (e.g., Alley, 1980; Gentile & McMillan, 1980); a lowered sense of community esteem

(Needle, et al., 1981; Sweeney, 1981); reports of difficulties in communicating with parents (Dunham, 1976), perceptions that parents are demanding, unsupportive or resistant (Farber & Miller, 1981; Swick & Hanley, 1980; Weiskopf, 1980), and perceptions that schools are generally seen now as less effective than they used to be (Farber & Miller, 1981; Phillips & Lee, 1980). Community expectations for the teaching role, it has been suggested, may be quite different than teachers' expectations for the role (Dedrick & Dishner, 1982; Needle, et al., 1980; Phillips & Lee, 1980); furhter, community expectations related to teacher accountability may be seen as unrealistic because they are based on important factors over which teachers and the teaching process have little control (Dedrick & Dishner, 1982; Phillips & Lee, 1980).

More broadly-based societal variables. Perhaps in keeping with Terborg and Komocar's (1981) observation that schools are especially vulnerable to a variety of social conditions--social, economic, political, and legal, Phillips & Lee (1980) suggested that several broad social variables are important in understanding teacher stress. At the level of national events, they pointed to the general increase, especially in urban areas, of violence and crime (see also Gentile & McMillan, 1980; Neill, 1978). Truch (1980) discussed the impact of rising divorce rates and other family-related problems on the teaching process. Phillips and Lee (1980) identified an increasing incidence of legal disputes, setting teachers and schools into adversarial positions against student and parents (see also Johnson, et al., 1982; Weiskopf,

1980). Swick & Hanley (1980) and Alley (1980) both cited an increase in federally and state mandated programs as potentially stressful.

Phillips & Lee (1980) and Pines, et al. (1981) mentioned societally-rooted attitudinal issues, particularly those related to the sex roles commonly ascribed to women and men. Women, they noted, face sexism in the pursuit of teaching careers and also frequently face conflicts between career and family issues; men, on the other hand, may face questioning or poor social attitudes in relation to their decision to enter teaching. Farber & Miller (1981) identified another attitudinal issue, the increasingly common ascription of blame for the shortcomings of education to teachers themselves (see also Pines, et al., 1981; Truch, 1980).

Finally, at a level of nationally held values, Phillips & Lee (1980) identified two areas of potential conflict: (a) that between teaching's central focus on achievement and contemporary questioning of the value of achievement, and (b) the conflict inherent in the moral orientation of teaching--its basic focus on the transmission of values--and a deterioration in the value consensus of the society at large. Terborg and Komocar (1981), in a related vein, discussed the prevailing lack of consensus on school goals and appropriate means of measuring whatever goals are agreed upon.

Summary

Although predominantly suggestive in nature because few of the reports are based on scientific research, some clear implications about teachers' perceptions of stressors emerge in this literature. Most attention is clearly given to factors in the workplace, most notably issues emerging

from the teaching role--particularly as it concerns interpersonal relations with students--and administrative practices in the school and school district. Related literature underscores the salience of some of the specific variables mentioned and renders them prime targets for continued, systematic inquiry: e.g., role conflicts; expectations and preparation for the demands of daily, intensely personal interactions with students; qualities of professional relationships with administrators; and selected issues in the structure of occupation, such as opportunities for professional development and recognition.

Among workplace issues, collegial relationships are mentioned relatively rarely. This absence may reflect satisfaction with existing levels of collegiality (e.g., colleagues may seldom impinge as stressors; or low levels of interaction--widely reported in related literature--may be acceptable to most teachers). Whatever its genesis, this situation bears implications for the design of interventions, for one of the primary findings in the coping literature is that the active professional support of colleagues is significant in alleviating work-related stress.

Individually-oriented variables are mentioned in this literature, but would appear to warrant more systematic attention, particularly as they interact with other levels of the ecology to enhance or diminish teachers' experience of stress. The same is true of family and social network variables, which--as will be discussed later--are significant in mediating individuals' experience of stress.

Finally, this literature reflects awareness of the potential significance of community-based variables in teachers' experience of stress, but

consideration of these issues is superficial. In almost all instances, they are mentioned as factors that might be important, but few data are offered to support the suggestion.

This literature also reflects the relative absence of systematic attention to two issues of primary importance. The first is the use of theoretical constructs that might (a) guide the field beyond the largely anecdotal and (b) yield information concerning the levels of importance that might be attached to the variety of concerns discussed as stress-producing. While several authors refer to the work of stress theorists, seldom are the constructs offered in those works used as a framework against which to specify operational definitions, or test hypotheses. The second issue focuses on absence of attention to the inter-relationships between variables at different levels of the teacher's ecology that may explain both pattern and variability in teacher response to stressors. It is to both of these areas of concern that we now turn.

Linking Teacher Stress to the Broader Body of Literature on Occupational Stress

Concerns with stress in teaching have grown largely out of teachers' experience and their frustrations over conditions often pertaining in their work. Although only a few attempts have been made in the teacher stress literature to draw linkages between stressors in teaching and the experience of stress in other occupations, there is a significant body of literature on job-related stress in other fields of employment. Constructs derived from this literature may provide useful guidance for sorting through and understanding the varied mix of identified concerns and stressors in teaching.

Individually-oriented variables

Several factors related to individual personality, style, characteristics and circumstances have been identified in the literature as influencing perceptions of and responses to stress. While some emerge out of person-environment interactions (current and historical), rather than the person alone, they are presented here because they are most commonly thought of as "individual" characteristics.

Personality factors. Much attention has been given to two specific patterns of differences in personality, labelled Type A and Type B (Cooper & Marshall, 1978; Jenkins, Rosenman, & Friedman, 1967; McMichael, 1978; Rosenman, Friedman, Straus, Wurm, Jenkins, Messinger, Kositchek, Hahn, & Werthessen, 1965). In general, Type A personalities--characterized by perfectionism, striving toward achievement, high commitment to the job, low ability to relax, high activity levels and high ambition--have been associated consistantly with higher incidence of coronary heart disease (one outcome of stressful experience) than their Type B counterparts--people characterized as more relaxed, less prone to impatience, more apt to enjoy vocational interests, and less driven by time pressures (Jenkins, et al., 1967; McMichael, 1978; Rosenman, et al., 1965). While labelled "types," the descriptions refer not so much to static personality traits, but rather to style of behavior "with which some persons habitually respond to circumstances that arouse them" (McMichael, 1978, p. 134).

Among other personality factors linked to perceptions of and response to stress are locus of control and motivation. Persons who feel they have more control over the occurrence of an event (internal locus of control)

experience fewer negative effects associated with stressors (Glass & Singer, 1972; Kyriacou & Sutcliffe, 1978; Pearlin, et al., 1981; Pearlin & Schooler, 1978). In examining this variable among teachers, Kyriacou and Sutcliffe (1979) found a significant positive correlation between external locus of control and self-reported levels of stress.

Motivation also has been mentioned as influential in individuals' perceptions of and responses to stress (Mechanic, 1974). House (1972, reported in Fell, [1979]) found relationships between type of motivation for work (extrinsic, defined as seeking money, prestige and approval; or intrinsic, defined as seeking self development, self utilization, and value expression) and incidence of occupational stress and heart disease. The relationships varied, however, by different occupational groups; extrinsic motivation was associated with higher rates of heart disease among white-collar workers, while intrinsic motivation was related to higher rates among blue-collar workers.

Still other personality factors discussed in relation to perceptions of stress and the occurrence of stress-related illnesses are anxiety and flexibility/rigidity. Highly anxious persons or those subject to chronic anxiety are higher in sensitivity to potential stressors (Janis, 1974) and have higher rates of stress-related illnesses (Cooper & Marshall, 1978). Persons who are highly flexible may be more subject to stress resulting from work overload than their less flexible counterparts, but persons higher in rigidity are more likely to experience jobs involving time pressures or dependence on others as stressful (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964). Neuroticism, introversion (Cooper & Marshall, 1978),

ego involvement in the job, and commitment to long-term behavior patterns (Janis, 1974) have also been linked to a higher likelihood of perceiving events as stressful and experiencing stress-related illness.

Self-esteem. Self-esteem, the individual's perception and valuation of self, has been associated both with the perception of events as stressful and with responses to stress (Pearlin & Schooler, 1978). Pearlin, et al. (1981) noted that life events (or potential stressors) are "particularly likely to eventuate in stress when they also result in the diminishment of self" (pp. 339-40); similarly, a diminished self-concept often leads to increased vulnerability to symptoms of stress. Kyriacou & Sutcliffe (1978) observed that the extent of threat to self-esteem affects the individual's appraisal of an event as stressful. These observations, taken together, suggest that (a) level of self-esteem influences the individual's perception of any given event as stressful, and, (b) the experience of stressful events as negative may diminish self-esteem. Doherty (1980) in a study of student teachers in England, found low self-esteem positively related to lower competence, lower social integration, higher absenteeism, more emotional problems stemming from teaching, and higher levels of perceived stress.

Coping style and ability. While clearly related to other situational factors and circumstances (e.g., resources and support available from other persons), there is evidence that individuals may show relatively consistent differences in coping ability, style and efficacy (Kyriacou & Sutcliffe, 1978; Lazarus, 1966; Mechanic, 1974; Pearlin & Schooler, 1978; Pines, et al., 1981). Pearlin, et al. (1981) suggested that "normative modes of

coping" are learned from membership groups and that these modes vary across specific problems and the social roles in which they emerge.

In research examining the effects of coping abilities, Kobasa, Maddi & Covington (1981) found that "hardiness"--composed of commitment, security and control--mediated the relationship between constitutional predisposition, stressful events, and stress-related illness. In a related vein, the individual's perceptual and cognitive appraisal of an event has been found to be associated strongly with his or her experience of the event as stressful (Lazarus, 1966; Lazarus, et al., 1974; Lazarus & Cohen, 1977; Lazarus & Launier, 1978; Pearlin & Schooler, 1978). McGrath (1970b), too, has suggested that individual "cyclical response capabilities"--involving satiation, fatigue, mood, and learning--influence response to stress. While coping responses and abilities are thus subject to situational influence and variation, it is likely that individuals show elements of consistency in coping style; further, differences in coping style may be related to variation in perceptions of the responses to potentially stress-producing events.

The process of adult development. Although the study of adult development is relatively young (Havighurst, 1973), there is some suggestion in the literature that variations and patterns in adult development may be linked with the experience of stress (e.g., Pines, et al., 1981). Kellam (1974), for example, suggested that it may be important to consider stage of life in measuring stressful life events. Thomas and Robbins (1979) noted that at midlife there may be a shift in salience of occupation, with job becoming less important relative to other life interests, leading

to the possibility that job-related events may have reduced potential for evoking stress in later years.

The possibility that developmental stage may be related to stress perception emerges briefly in the literature on teaching as well. Sweeney (1981), for example, found that older teachers tended to derive more satisfaction from their jobs, a finding that could be related in part to changes in values and needs across the life span. In a study of longevity in teaching, Charters (1970) observed that stages in the life cycle should be considered, particularly in reference to women's "survival" in school districts. Cardinell (1981) suggested that teachers should consider developmental stages in understanding response to stress, observing that it is "normal" to have low work satisfaction in midlife. While empirical support for the latter propositions is lacking, patterns of variation in personal goals and interests across the life span represent an intriguing source of potential variance in perceptions of stress among teachers. Perun & Bielby (1981), for example, noted the special importance of adopting a developmental life-span approach in examining the occupational choices and behavior of women. In a slightly different vein, Super (1966) suggested that vocational choice is not an "event" that happens at a point in time, but is rather a process that continues over much of the life span. Combined with findings such as Fruth, et al.'s, (1982) that teachers who leave the profession are more concerned about personal growth than are those who stay--and observations that many teachers who enter do not intend to stay in teaching until retirement (Lortie, 1975; McGuire, 1979)--Super's (1966) suggestion implies that changing careers may be a

normal part of development for many adults, perhaps related to but not likely caused only by increased perceptions of stressors on the job.

Stage of career and employment. It has also been suggested that different stages of careers are characteristically associated with variations in perceptions of and responses to stress. The initial period of employment, for example, has been cited as the most critical in integrating a "new" person into the employing organization (Caplow, 1964; Porter, Lawler, & Hackman, 1975) and in affecting the individual employee's attitudes and behaviors (Cherniss, Egnatios, & Wacker, 1976). With specific reference to teachers, Fuller (1969) suggested that professional concerns vary with different stages of career development, although Bishop (1977) found that level of experience did not distinguish among teachers with reference to some types of collegial interaction. Lipka and Goulet (1979), however, reported findings that the importance of teaching attractions varies across the career span, with "altruistic" factors acquiring more importance among teachers in the later years of their careers, and "pragmatic" factors (with the exception of economic considerations) decreasing in importance. Further, Scheinfeld & Messerschmidt (1979) suggested that level of experience in teaching may be related to the teaching style and curriculum a teacher chooses. To the extent that individual goals (cf., Ortiz, 1978), concerns, experience, and integration into a career and organization (cf., Start & Laundy, 1973) may play a role in the individual's perception of given events as stressful, career stage may be a variable of importance in differential responses among teachers to potential stressors.

Expectations and preparation. The literature also suggests that an individual's expectations and preparation are implicated in the perception of work-related stress. Meichenbaum, Turk, and Burstein (1975) noted that the absence of cognitive preparation is involved in perceptions of an event as stressful; Zaharia and Baumeister (1981) lent empirical support with their observation that a realistic preview of the job may affect worker stability. Cooper (1980), focusing on dentists, suggested that disparities between expectations for work (predating training or formed during training) and the realities of the job may themselves be stress-producing. This area of concern may be particularly important for teachers, given relatively frequent observations that many teacher education programs are inadequate in preparing new teachers for the realities of classroom and school system life (e.g., Lortie, 1975). Vance and Schlecty's (1982) observations on the limited power of training vis a vis the occupational structure of teaching, however, are important to bear in mind here.

Variables related to family and personal social network

A body of literature focused on stress in relation to both occupational issues and mental health indicates that family and personal social network variables are implicated in the perception and experience of stress in two major ways. In both instances, family and social network variables tend to be involved as context for the experience of occupational stress, sometimes increasing and sometimes decreasing the likelihood that any given work-related event will be perceived as stressful and experienced as negative in its consequences.

The presence of other stressful events. Several authors have suggested that the simultaneous occurrence of many life changes increases the likelihood that any given event will be perceived as stressful (Pearlin, et al., 1981; Rutter, 1981), even where the given event might not be experienced as stressful under "normal" circumstances. Family problems--such as marital conflict or the difficulties of managing time and family/work commitments--may "spill over" into the work situation, causing work-related problems or increasing the probability that work-related events will be perceived as stressful (Cooper & Marshall, 1976, 1978; Pines, et al., 1981). There is evidence to indicate, for example, that the presence of young children increases the risk of depression among women who are experiencing other sources of stress (Brown & Harris, 1978). Such family-related considerations may be particularly important to consider in the occupation of teaching, where the majority of practitioners are women, who--traditionally and more typically than men--have to deal with the simultaneous demands of multiple roles when employed.

Stress-producing events occurring in other areas of the teacher's ecology--at home, in the family, in the marital role, in the parenting role, and in other areas of community involvement--thus may increase the probability that particular events or situations at school will be experienced as stressful. As suggested by Holmes and Masuda (1974) the experience of other life changes may be associated with "less desirable aspects of teaching performance" (p. 64).

The support function of the social network. Counterbalanced against the role that other events at this level of the ecology may play in

increasing the perception and experience of work-related stress is the role that members of the personal social network may play in mediating the impact of stress. The personal social network is generally construed as the social group linked to an individual, made up of family members, friends, neighbors, co-workers and other close associates (Pattison, DeFrancisco, Wood, Frazier, & Crowder, 1975; Turkat, 1980). Among the members of this network are usually people who are supportive of the individual. Those members of the network perceived by the individual as supportive constitute his or her support system. The functions of the support system are several; they include the provision of love, affection, esteem, commitment, security, guidelines, expectations, evaluative feedback on performance, information and assistance (Cobb, 1976, 1979; Kaplan, Cassel & Gore, 1977; Mitchell & Trickett, 1980). Summarizing a good deal of prior work, House (1981) suggested that at base social support involves emotional concern, instrumental aid, information and appraisal. Each member of an individual's support system, therefore, is one who provides for one or more of those needs.

Social support is generally thought to have both direct and indirect effects on individual's perceptions of and responses to stress. It may have direct effect insofar as supportive persons may act to remove or modify potential stressors (House, 1981; Mueller, 1980). It may have indirect effects in buffering or protecting the individual from some of the negative consequences of a stressor (Dean & Lin, 1977; Eaton, 1978; House, 1981; Rutter, 1981); it may also have indirect effects in improving the fit between the person and the environment (Cobb, 1979; Kaplan, et al.,

1977), through helping the individual accomplish necessary tasks or adapt to the demands of the situation. Social support has also been linked to coping ability (Pearlin, et al., 1981).

Whatever the specific mode of functioning, there appears to be widespread agreement that the impacts of stressful events are mediated not only by individually-oriented variables, but also--and in some circumstances more importantly--by the quality and quantity of social support available to the individual from members of the personal social network. Mechanic (1974), for example, suggested that it is increasingly

> clear that major stresses...are not amenable to individual solutions, but depend on highly organized cooperative efforts that transcend those of any individual...no matter how well-organized his [sic] personal resources (p. 34).

The presence of social support, particularly in the context of stressful events, has been linked to a variety of improved outcomes for individuals in the areas of physiological health and well-being (Berkman & Syme, 1979; Cobb, 1979; Kaplan, et al., 1977), as well as mental health and psychological well-being (Cobb, 1979; Mitchell & Trickett, 1980; Pattison, et al., 1975; Turner, 1981; Williams, Ware & Donald, 1981). There is also a growing body of literature on social support in specific reference to work-related stress.

In general, it appears that the perception of stress at work is influenced by the presence of social support (e.g., Payne, 1980). More specifically, a supportive spouse, family system, and friends have been related to better coping with work-related crises such as job change or termination (e.g., Gore, 1978: House, 1981). Supportive persons <u>at work</u>, however, have been most consistently linked to individual perceptions of job stress, job satisfaction, and--less strongly--to health outcomes

related to work stress (House, 1981; LaRocco & Jones, 1978). House (1981) in fact concluded that work in organizational sociology and psychology over the last 20 to 40 years can be read as implying that social support at work generally reduces occupational stress and improves physical and mental health. While there is variation by occupation in the extent to which support of co-workers or supervisors is more or less influential in stress perception and stress outcomes, several sources of support have been associated with lowered perceptions of work stress: the support of supervisors (Caplan, Cobb, French, Van Harrison, & Pinneau, 1975; House, 1981; MicMichael, 1978), coworker support (Caplan, et al., 1975; House, 1981, and good working relationships with subordinates (McMichael, 1978, citing Caplan, 1971). It has also been found, however, that high work pressure is associated with lowered cohesive behavior on the part of employees (Klein, 1971), implying that the relationship between work stress and support is fairly complex.

Overall, social support from family and friends is implicated in individual response to work-related crises. More importantly, social support from co-workers and supervisors on the job appears to be significantly related to employees' perceptions, experience of, and responses to stress.

Work-related variables

Significant amounts of time and attention have been given to the characteristics of jobs and work situations that are associated, sometimes causally, with perceptions of job stress and experience of stress-related outcomes. Among work characteristics most frequently discussed are several related to the nature of the occupational role and several

related to working conditions. While the variables presented below do not represent an exhaustive catalogue of the literature on job characteristics frequently leading to the experience of stress, they do reflect the variables that are most likely to be associated with stress in teaching.

Role-related variables. At one level of concern, role conflict is a frequently-mentioned source of stress in many occupations. The conflicts implied here may be related to a clash between two demands emerging out of the same job (Cherniss, et al., 1976; Cooper & Marshall, 1978; French & Caplan, 1972; Kahn, et al., 1964); for example, the simultaneous demands that teachers evaluate and counsel their students, one demand implying objective, unemotional behavior and the other requiring subjective, empathetic understanding. The conflicts implicit here may also emerge from the request that the employee do things he or she does not want to do or does not consider to be part of the job (Cooper & Marshall, 1978; French & Caplan, 1972); for example, the conflict between the teacher's perception of appropriate, professional job demands and the frequent requirement that teachers monitor students' lunch room behavior and bathroom activities. Another source of conflict here may lie in disagreements between the employee and the supervisor or subordinates in the implementation of job activities (French & Caplan, 1972). Still other conflicts may inhere in the clash between expectations for role behavior that are encouraged during training and the realities of appropriate role behavior on the job (Cherniss, et al., 1976); they may also emerge from discrepancies between goals implicit in the job description and the implementation capabilities of the employee or even the organization (Warren,

1975). Finally, role conflict may emerge from unresolved issues in appropriate professional-client relations (Cherniss, et al., 1976; Maslach, 1978), or from the clash between employee perceptions of professional ethics and organizational or institutional demands (Cherniss, et al., 1976).

Role-related conflicts may also emerge out of boundary role positions, jobs requiring that an employee link two or more systems (Miles, 1980) or cross organizational boundaries as a matter of normal work demands (French & Caplan, 1972). The conflict here resides not so much in potentially oppositional demands within one role, but rather in a clash between systems, institutions, or organizations whose primary interest and needs may differ. Stress for the employee may come from the need to balance the interests of more than one constituency and from concomitant needs to deal with inconsistent information, the efforts of various constituencies to influence actions, and requests to perform the role of change agent with the "other" constituency (c.f., Kahn, et al., 1964; Miles, 1980). Boundary role-related conflicts have been identified as important stressors for school administrators (Tung & Koch, 1980); they may emerge also for teachers whose specific jobs (or sense of professional obligation) require that the potentially competing interests of families, community, and the institutional school be reflected in daily work activities and decision-making.

Coming into play as an additional source of occupational stress is role ambiguity. Reflective of fundamental uncertainty as to the requirements or expectations of a given job, role ambiguity may emerge from poorly defined work objectives, the absence of clear expectations on the

part of others for one's work, or an inadequate definition of job responsibility (Cooper & Marshall, 1978; French & Caplan, 1972). Role ambiguity may also result from a change in the structure of the work situation (Cobb, 1974). Role ambiguity has been linked to several negative outcomes including low job satisfaction and low self-esteem (Kahn, et al., 1964; Margolis, Kroes, & Quinn, 1974). While role ambiguity may emerge as a source of stress for some teachers--e.g., lack of clarity in job objectives or expectations, (Lortie, 1975)--it may be less commonly experienced than other role-related variables in teaching (Pettegrew & Wolf, 1982).

An additional source of occupational stress inherent in some jobs is responsibility for people (Cooper & Marshall, 1976, 1978; French & Caplan, 1972; Pines, et al., 1981). Jobs requiring such responsibility are often focused on objects, which--while frequently entailing other types of stress--do not require consideration of the impacts one's actions are having on the lives of others. Responsibilities for the work of others, for their career progression or job security, are often mentioned. While this source of stress is discussed most frequently with reference to executive and managerial jobs, it emerges also in discussion of stress in the mental health professions, where responsibilities for "curing" clients' problems may become particularly burdensome (e.g., Maslach, 1978). Responsibility for people also appears salient as a potential stressor for many teachers who feel keenly a sense of responsibility for the progress and well-being of their students. The sources of stress in relation to this role demand emerge both from the job-related need to take actions that may run counter to the perceived needs of students and from concerns over

the adequacy of attention to the needs of individuals for whom one is responsible.

A final role-related stressor that emerges both in the general literature on occupational stress and in accounts of teaching demand is role overload. Including both quantitative (too much work to do) and qualitative (work that is too difficult) dimensions, role overload as a stressor has been linked to a number of negative outcomes (Cooper & Marshall, 1978; French & Caplan, 1972; Pines, et al., 1981); a simple change in workload may prove significant in relation to negative outcomes (Cobb, 1974). Brief perusal of the literature reporting teachers' feelings about their work indicates quickly that role overload--perhaps confounded frequently with role conflict--would be claimed by many as a significant stressor (e.g., Pettegrew & Wolf, 1982). It is probably true also that quantitative role overload would be identified as a stressor more often than qualitative overload, although certainly some expressed concerns--for example, about integrating handicapped children into "regular" classrooms--reflect qualitative as well as quantitative worries.

Variables related to working conditions. A second set of frequently discussed sources of occupational stress pertinent to the teaching role relates to the conditions that form the context of the teaching job. Among the most significant of these conditions is poor working relations with others, defined as low levels of support, low trust, and low levels of interest in helping with co-workers' work-related problems (Cooper & Marshall, 1976, 1978; French & Caplan, 1972). The presence of poor working relationships, be they with supervisors, subordinates, or colleagues, has been linked to several negative outcomes, including job

dissatisfaction (Cooper & Marshall, 1978; French & Caplan, 1970; Kahn, et al., 1964). Negative outcomes from this source of stress may be related not only to factors that are explicitly present (e.g., poor collegial relations, poor or irrelevant supervision), but also to the absence of adequate levels of support (Cooper & Marshall, 1978; Lazarus, 1966). Several factors point to the importance of considering poor working relations with others as a potentially important source of job-related stress in teaching: for example observations that teachers are highly social and value opportunities to interact with others (Farber & Miller, 1981; Holland, 1973); descriptions of teaching as isolated (Bishop, 1977; Lortie, 1975); structural norms that prescribe most teaching as the activity of a-single-teacher-in-a-single-room (Lortie, 1975); and complaints about poor or non-existant supervision (e.g., Dedrick & Dishner, 1982).

Another variable often linked to the experience of job-related stress and job satisfaction is participation. Defined as the capacity to influence decision-making in one's environment or organization, high levels of participation have been linked by French & Caplan (1972) to a variety of positive outcomes such as high job satisfaction and high self-esteem, good use of skills, high productivity, good working relationships, positive attitudes toward work, low levels of role ambiguity, low turnover and low absenteeism. Low levels of participation, on the other hand, have been associated with low levels of job satisfaction and low feelings of self-worth (Kasl, 1973; Margolis, et al., 1974). Lack of autonomy, linked to opportunities for participation, has also been identified as a stressor (Pines, et al., 1981). The issue of participation may be problematic--e.g., there may be conflicts between organizationally mandated authority

and the goals of participation and some individuals may be less than enthusiastic about participating (cf. Cooper & Marshall, 1978). Nonetheless, it seems a potentially important variable to consider in teaching, where there may be inherent conflicts between the attractions of the role attached to the independence that it offers and the drawbacks of the role attached to its isolation from the hierarchy of decision-making power in many school organizations.

Also implicated in this set of variables are poor working conditions defined in a more physical sense. They include several factors that may be present in some schools--for example, annoying levels of noise, perceived danger, too many things to do (Poulton, 1978), as well as health hazards, safety hazards and unpleasant environments (Kasl, 1974). Poor working conditions have been linked to negative outcomes for physical and mental health in some occupational settings (Kasl, 1974). While this level of variables may not be directly relevant to the majority of public school settings, the incidence of violence (Bloch, 1977; U.S. Department of Health, Education and Welfare, 1978), and dilapidation of school facilities, particularly in urban areas, indicates that poor working conditions indeed may be a source of significant stress for some teachers.

Issues in wages, promotion, and career development have also been discussed in the literature as sources of occupationally-related stress. Feelings that salaries are not commensurate with skills and responsibilities; that promotional practices are unfair or promotional opportunities too limited; that one's job is not secure or that one's career ceiling

has been reached, have all been suggested as factors of importance in understanding employees' perceptions of work-related stress (Cooper & Marshall, 1978; Kasl, 1974). The absence of appreciation or rewards for one's work may also be stressful (Pines, et al., 1981). Observations drawn from the literature reporting teachers' concerns, and discussions of the limited promotional opportunities pertaining in most school systems (e.g., Lortie, 1975), indicate the potential salience of this set of variables in understanding teachers' perceptions of stress.

Person-environment fit. Based on theoretical work in motivation by Lewin (1951) and Murray (1959), the concept of person-environment fit constitutes a way of viewing the "match" between the individual's characteristics, perceptions, and needs, and the work environment's demands and supplies (Van Harrison, 1978). The model of person-environment fit contains several elements, described by French, et al., (1974); and Van Harrison (1978).

The objective environment is the external environment, as it exists independent of the person's perceptions. The subjective environment includes the person's perceptions of the objective environment; it contains those elements perceived and reported by the person. The objective and subjective environments are linked by the person's contact with reality; the greater the contact, the smaller the discrepancy between the two.

The objective person is the person as she or he "really is"; included are the person's values, needs, abilities and other relatively enduring characteristics. The subjective person is the person's self-concept or self-perception of identity. The objective and subjective persons are

linked by the individual's accuracy of assessment; the greater the accuracy, the smaller will be the discrepancy between the two.

Two types of fit between these elements are important; the objective person-environment fit (how well, independent of the person's perceptions, the individual and the work environment fit together) and the subjective person-environment fit (how well the individual's perceptions of the self fit together). Both types of fit are focused on the extent to which the motives or needs of the individual are satisfied by supplies from the work environment and the extent to which the demands and the needs of the work environment are satisfied by the abilities of the person.

Good mental health generally follows good "fits", i.e., it results from the absence of sizable discrepancies between the objective and subjective person, the objective and subjective environment, the objective person-environment fit and the subjective person-environment fit (Van Harrison, 1978). Specifically in relation to occupational stress, the model of person-environment fit predicts that a job will be stressful

> to the extent that it does not provide supplies to meet the individual's motives and to the extent that the abilities of the individual fall below the demands of the job which are prerequisite to receiving supplies (Van Harrison, 1978, p. 178).

Conceptual and empirical work using this model of person-environment fit has led to several observations of importance in the effort to understand and respond to teachers' experience of work-related stress. First, the model makes clear that stress cannot be conceptualized as a undimensional variable, (e.g., "teacher stress") with undimensional effects (e.g., "burnout") on all or most individuals in the same work enviornment. Work-related events are likely to be perceived as stressful to the extent that there are poor fits between several elements of the work "world" the

realities of the working situation and the individual's perceptions of it; the generally observable and enduring aspects of the individual (such as his or her values, needs, and skills) and the individual's own perceptions of his or her characteristics; the motives and needs of the person in the workplace in relation to the ability of the workplace (supplies) to meet those needs; and the demands of the work environment in relation to the individual's abilities (skills) to meet those demands. While this formulation introduces a degree of complexity into discussions of occupational stress, it would seem to be necessary complexity given the large number of personal, network, and work-related variables that have been associated with individual experiences of and responses to occupational stress.

And while the formulation highlights the importance of considering several elements of the person, environment, and person-in-the environment, it does not deny the usefulness of examining more universal elements of occupational stress and response. Although the individual's experience may be best understood with reference to the specifics of his/her person and work setting, it is also true that there may be patterns of experience and response among persons across similar environments. Thus, it may be both true and useful to observe that constant requests to do menial or non-professional tasks constitute a stressor for many teachers. The observation of this pattern, however, is insufficient to explain <u>why</u> this is so, when it is perhaps not true, and how it might be remedied. The model of person-environment fit, which focuses on answers to the above questions, both demands and allows more fine-grained analysis that moves beyond description and simple, blanket prescriptions.

A second observation is that person-environment fit is a dynamic concept, incorporating the assumption that over time, varying amounts of experience on a job, and the life course of an individual, the fit between the person and the "same" work environment--or the fit between the person and an occupation--will change (cf., Van Harrison, 1978). This observation implies that attention to issues in person-environment fit must be maintained over time. It is not sufficient to identify stressors, remove them or effect a "cure," and expect that work-related stress will not again emerge.

A third observation is that attempts to address the problem of work-related stress will likely be effective insofar as they take at least some individually-focused orientation:

> The inescapable conclusion of person-environment fit theory is that in order to reduce job stress for all persons, programs must allow individualized treatment.... (Van Harrison, 1978, pp. 199-200.

Recognizing that individually-oriented responses contravene many of the bureaucratic needs and organizational principles of institutions (such as school systems), Van Harrison (1978, citing Beckhard, 1972; Katz & Kahn, 1966; Likert, 1967) nonetheless suggested that the introduction of "flexible control structures"--such increased participation, employee teams, cross-group coordination--may respond both to the stress-related needs of the individual and to the organizational/efficiency needs of the institution.

Use of the person-environment fit model as a tool for understanding teachers' experience of and response to stress has not been explored to

any significant degree. Suggestions of its relevance do come from some quarters, however (Needle, et al., 1980; Phillips & Lee, 1980). Erlandson & Pastor (1981), for example, observed that most teachers have what they termed "higher order needs" (including needs for participation, independence, challenge, expression, use of valued skills) but that most school systems best meet lower order needs (e.g., fringe benefits, job security, friendly coworkers). Cherniss, et al. (1976) indentified gaps in training as a significant source of stress for teachers, focusing on the discrepancy between teachers' expectations as developed in training and the realities of job requirements once they are "really" teaching. Conway (1976), looking at variations in teachers' desires for participation in decision-making, concluded that "administrators must match the desire for participation of the individual with the opportunities to realize those desires" (p. 139). Coughlan's (1969) findings of heterogeneity among secondary school teachers along five bipolar value factors certainly imply that different environmental interventions will have varying effects, depending upon the individual. The variety of factors identified (rule-centered vs. person-centered; school role expecations vs. student needs; belief in school authority figures vs. colleagues as sources of authority; focus on intellectual vs. social growth of children; viewing self as a source of support vs. dependence on colleagues) indicates clearly the wide range of potential interventions that might be employed in improving (or worsening) the fit between the teacher and his or her school (see also Wehling & Charters, 1969). While these are but examples, they suggest

the potential power of applying theory in person-environment fit to the examination of the sources and consequences of stressful events as experienced by teachers.

Summary

The body of theoretical and empirical work in the area of occupational stress is thus rich in potential for increasing educators' understanding of stressors in teaching and teacher responses. A host of individually-oriented variables (including personality factors, self-esteem, coping style, stage of development and career, expectations and preparation) appear to be implicated in individuals' perceptions of and responses to stress at work. To the extent that teachers as a group possess similar individual characteristics, there may be patterns in their perceptions of and responses to stress at school. To the extent that teachers are heterogeneous and variable in these individually-oriented factors, however, it may be inappropriate to conceptualize "teacher stress" as an issue affecting all teachers in a similar way.

Similarly, variables at the level of personal social networks appear to be implicated in individual perceptions of and response to work-related stress. The simultaneous occurrence of multiple stressors in non-work areas of life, for example, heightens individual vulnerability to perceiving job-related events as stressful and experiencing negative consequences as a result. In another and relatively powerful finding, the support available from the personal social network--including family, friends, and co-workers--appears to have a significant mediating effect on individual experiences of

stressful events and individual experience of the consequences of those events. While co-workers' support appears more powerful in mediating the sources and consequences of stress at work, the support of family and friends is also implicated in response to work-generated stress. Thus, individual variation in teachers' general life stress and levels of support can be expected to create variation in teachers' perceptions of specific conditions as stressful and negative in their consequences.

In the area of work-related variables, too, the literature on occupational stress in general offers conceptual guidance for understanding more adequately the issues identified by teachers as stressful and negative in their consequences. For example, applying concepts of role-related variables and working conditions to "concerns" identified by teachers may allow more adequate address to the sources of stress and its subsequent alleviation. A concern (or potential source of stress) related to role, for example, may require more long term and consensual attention than might a concern related to working conditions, some of which may be amenable to relatively simple alterations in practice. Finally, the model of person-environment fit offers several suggestions for ways of understanding how teachers and teaching settings "match" to produce effective and satisfying situations or, conversely, fail to achieve a "fit," leaving the teacher a stressful and unsatisfying experience and the setting with its needs (or demands) unfilled.

The consequences of stress

We turn now to a consideration of the consequences of stress. Here again, our attention focuses on stress perceived as negative in its impact, with full knowledge that many stressful events are positive in outcomes for the individual. In the discussion below, questions concerning the impact of stress are somewhat oversimplified. The consequences of stress cannot be understood fully without simultaneous reference to person and situation factors; this is especially important with respect to the support available to and used by the person as a mediator of stressful events and their consequences. Bearing in mind these cautions, however, the literature permits some general observations about consequences most frequently associated with individuals' experience of stressful events.

The consequences of life stress and occupational stress

While specific factors related to etiology and causation are the subject of some debate in the field (e.g., Cassel, 1974), it is generally acknowledged that an individual's experience of stressful life events is frequently associated with negative outcomes in physical and mental health. The negative effects may be felt in physiological pathology, such as coronary heart disease (Carruthers, 1980;, Cooper & Marshall, 1980; Rahe, 1974; Rahe, McKean, & Arthur, 1967), in increased susceptibility to depression, neurosis, and other manifestations of poor mental health (Cobb, 1974; Myers, Lindenthal, & Pepper, 1971; Paykel, Myers, Dienelt, Klerman, Lindenthal, & Pepper, 1969; Vinokur & Selzer, 1975), or in specific behavioral problems (drinking, traffic accidents [Vinokur & Selzer, 1975]). It is

important, however, to note that life stress and its consequences are interactional; for example, one life event (e.g., job disruption) may exacerbate role strain, which may decrease self-concept, which, in turn, may increase vulnerability to experiencing other events as stressful (Pearlin, et al., 1981).

The effects of occupational stressors have also been studied in some detail. As is true of more general life stressors, high levels of stress at work have been associated with various manifestations of physiological strain and pathology (Carruthers, 1980; Cobb, 1974; Cooper & Marshall, 1976; Fell, 1979; Margolis & Kroes, 1974), as well as various forms of emotional tension and psychological strain, such as alcohol abuse, chronic anxiety, emotional illness, and depression (Cherry, 1978; Cobb, 1974; Cooper & Marshall, 1976; Fell, 1979, Kahn, et al., 1964; Kasl, 1974; Margolis & Kroes, 1974). In addition, there are specific job-related manifestations of response to stressful conditions: absenteeism, turnover, lower productivity and effectiveness at work (Freudenberger, 1977; Kasl, 1974; Margolis & Kroes, 1974; Pines, et al., 1981); lowered cohesive behavior (Klein, 1971); lowered job satisfaction (Kahn, et al., 1964; Kasl, 1974; Margolis & Kroes, 1974) and lowered self-esteem (Kasl, 1974; Margolis & Kroes, 1974). It has also been suggested that high levels of stress at work are associated--particularly for persons in various forms of human service work--with a variety of behavioral and attitudinal changes frequently directed at the clients with whom the employee is working. These include withdrawal and distancing (Freudenberger, 1977; Maslach, 1976; Mattingly, 1977) as well as cynicism, negativism, blaming the victim, and

dehumanizing the client (Cherniss, et al., 1976; Freudenberger, 1977; Maslach, 1976). While the latter observations enjoy some popularity in the literature, their empirical base is less systematic and somewhat weaker than that available for the other observed consequences of occupational stress.

The consequences of stress in teaching

Stress in teaching has come to the fore as a topic of significant concern in large part because it is assumed to have deleterious consequences on teacher performance and teacher turnover, both of which--it is further assumed--affect student performance and learning. In view of these widely held assumptions, it is somewhat shocking to find so little literature focused on systematic examination of the consequences of stress in teaching. While assertions concerning consequences are frequently made, they are generally not grounded in empirical inquiry but rather seem to flow from the easy assimilation of observations concerning stress effects in other (notably human service) occupations and from generalizations based on largely anecdotal accounts. While the authenticity of the experience is undeniable for many, the consequences of stress for teachers as a group and for students are still at best largely speculative (e.g., Phillips & Lee [1980] stated that "one might hold that teacher stress does frequently lead to teacher anxiety and that teacher anxiety in turn does lead to lower teacher effectiveness" [p. 104, emphasis added]). In some circumstances, descriptive inquiry supports or suggests probable consequences, but in most cases, Tosi

and Tosi's (1970) observation still holds: it is not clear at what points identified teaching stressors are identified with poorer performance in the classroom.

In view of these limitations, generalizations about the consequences of teacher stress are suggestive at best. The consequence most commonly discussed in the teacher stress literature is teachers leaving the profession (Belok, 1965; Dixon, Shaw, & Bensky, 1980; Dunham, 1976; Farber & Miller, 1981; Jones & Emanuel, 1981). Even here, however, there are no sound data to suggest if stressors per se--or which stressors--are causal in decisions to leave the field. And while the departure of trained teachers from the profession is a phenomenon frequently assumed to have deleterious consequences for students, particularly poor students (Farber & Miller, 1981), there are also suggestions that persons working in high stress situations should leave after a period of time (Freudenberger, 1977) and that low achieving students may do best with new and relatively inexperienced teachers (Summers & Wolfe, 1975). A sound case for the generally deleterious consequences of teachers leaving the profession seems to await more solid empirical backing.

Perhaps more damaging that an outright decision to leave the profession, however, is the evolution of negative attitudes and diminished capacities among highly stressed teachers who stay on the job. Among the most general of these consequences cited in the literature is decreased job satisfaction, a lowered sense of professional competence and self-esteem, loss of confidence in oneself, and a growing inability to make decisions (Dunham, 1976, 1980; Farber & Miller, 1981; Needle,

et al., 1980, Swick & Hanley, 1980; Weiskopf, 1980). This may be reflected more specifically in an attitude of defeatism, purposelessness, helplessness and ineffectiveness (Bloch, 1977; Dunham, 1980; Gentile & McMillan, 1980; Jones & Emanuel, 1981); an attitude of cynicism, mistrust, distancing and blaming of students (Gentile & McMillan, 1980; Swick & Hanley, 1980; Weiskopf, 1980; Zahn, 1980); and feelings of boredom, apathy, frustration, and dissatisfaction (Alley, 1980; Dunham, 1976, 1980; Farber & Miller, 1981; Weiskopf, 1980). It may also be reflected behaviorally in actions that are generally aggressive (Dunham, 1976, 1980); a decreased ability to deal with classroom problems (Swick & Hanley, 1980); erratic teaching (Swick & Hanley, 1980); and general irritability and hypersensitivity to criticism (Dunham, 1980).

At a more physical level, teachers' experience of stress has been linked to fatigue and exhaustion (Alley, 1980; Farber & Miller, 1981; Gentile & McMillan, 1980; Needle, et al., 1981; Swick & Hanley, 1980; Weiskopf, 1980); psychosomatic disorders, depression and anxiety (Bloch, 1977; Dunham, 1976, 1980; Gentile & McMillan, 1980; Needle, et al, 1980; Phillips & Lee, 1980; Swick & Hanley, 1980; Truch, 1980; Weiskopf, 1980); sickness and absenteeism (Dunham, 1976; Farber & Miller, 1981; Truch, 1980); as well as mental illness and substance abuse (Dunham, 1976, 1980; Weiskopf, 1980; Zahn, 1980).

Among authors describing consequences, only two have suggested that stressors in teaching may have positive outcomes. Dunham (1976, 1980) indicated that a positive--or at least neutral--consequence of stress in teaching may be the development of new coping skills. Swick & Hanley

(1980), summarizing the work of several authors (Cook, 1979; Gaede, 1978; Pratt, 1978), suggested potentially positive outcomes: an increased sense of self-concept derived from having successfully solved problems; development of new skills useful in similar situations that may arise in the future; development of more effective teaching style and behavior; development of more positive relations with children and improved colleagueship with other teachers; and improved physical well-being.

While the list of both negative and positive consequences is long and serious, it is probably considered best as a list of suggestions for systematic inquiry and empirical investigation. With the exception of Dunham's (1976, 1980) work, the authors cited do not report data but rather generalizations based on other research or experiences; Dunham's work, while useful, is limited insofar as it is based largely on teacher self-report and is taken from British and German populations. As Cichon & Koff (1980) suggested, there is still a need for research on the ways in which teachers' experience of stress in schools affects their performance.

At a level of perhaps even more interest, there is also a need for systematic inquiry into the ways in which teachers' experience of stress, mediated by their teaching performance, affects student achievement and outcomes. Drawing on a sample of literature related to teacher performance, teaching effectiveness, and student achievement, it is possible to derive some suggestions for the direction of more systematic inquiry into the consequences of teacher stress.

Although Centra & Potter (1980) cautioned that there are several factors other than teacher behavior involved in student achievement, some kinds of teacher behavior--which may reasonably be linked to variations

associated with the experience of stress--seem to be implicated in better student achievement. For example, aspects of better classroom management--better organization, "withitness" (Kounin, 1970), established and reasonable routines, smoothness of transition, pacing--have been positively related to student achievement (Anderson, Evertson, & Brophy, 1979); similarly, more structuring of activities, direct instruction, teacher involvement with students, and positive response to students tend to be associated with student achievement gains (Centra & Potter, 1980; Good, Ebmeier, & Beckerman, 1978; Hughes, 1973; McDonald, 1975; Soar, 1972). It is reasonable to assert--and examine--the proposition that teachers experiencing high levels of work-related stress may be less able (for example, in terms of energy, attention, and capacity for significant involvement) to manifest these behaviors associated with better student outcomes. Further, some potentially stress-related teacher characteristics have been related to student outcomes. For example, Curtis and Altman (1977) found that teachers who had high self-concepts rated their students' self-concepts more highly than did low self-concept teachers; teacher ratings of student self-concept, in turn, were implicated in students' self-concept development. In other areas, some specific factors identified as stressors by teachers have been associated with lower student gains: Smith & Glass (1980), for instance, reported that as class size increases, student achievement decreases; teachers feel better and perform better in small classes. Similarly, greater centralization of decision making in schools--involving less participation by teachers--has been associated with more-whole-group instruction but less small-group instruction and individual work. More whole-group instruction, in turn, has been associated with lower student

achievement and learning in some curriculum areas (McDonald, 1975). Thus there are suggestions that some of the conditions cited by teachers as stressful (e.g., class size and opportunities for participation in decision-making) manifest direct linkages to teaching performance and student outcomes. Systematic exploration of some of these linkages is clearly warranted. Further, such inquiry is necessary if the intuitive "sense" of assertions concerning the consequences of teacher stress are to be supported by data and subsequently addressed by school systems and their constituencies.

Coping with stress

The negative consequences of stress, of course, are not inevitable for teachers or persons in any other occupation. They emerge when the individual's responses to a perceived stressor do not meet the demands implicit or explicit in the event.

Responses to stressful events, whatever their adequacy, are defined generally as coping behaviors. As is true of stress, there is a significant body of literature on coping; and just as the literature on stress implies consideration of response (or coping), so too does the literature on coping assume that responses emerge in the context of stress. Again, the transactional nature of stress and coping is underscored.

Coping responses include both overt and internal actions intended to manage demands that threaten to tax or exceed the individual's resources (Lazarus & Launier, 1978). Coping is also assumed to mean the variety of things that people do to avoid being harmed by strains; this variety includes responses designed to prevent, avoid, or control distress

(Pearlin & Schooler, 1978). From the perspective of person-environment fit, coping is defined as a change in the objective person-environment fit; it involves a change in the supplies or demands of the job or a change in the motives and abilities of the objective person (French, et al., 1974).

Coping begins in an individual's perceptual and cognitive appraisal of an event. At the outset, appraisal is central to the individual's definition of an event as stressful (Lazarus & Launier, 1978; Rutter, 1981); the same objective event may be seen as threatening or innocuous, depending on the outcome of appraisal (Lazarus, 1966; Pearlin & Schooler, 1978). Appraisal is central to the actions of coping, for through the ongoing appraisal processes, the individual's responses to the stressor are selected, implemented, and refined. Cognitive appraisal thus mediates both stress and coping (Folkman, Schaefer, & Lazarus, 1979; Lazarus, et al., 1974; McGrath, 1970a; Rutter, 1981); as a process, it involves assessment of the challenge contained in potentially threatening events and assessment of the range of alternatives available for responding to the challenge (Janis, 1974; Lazarus & Launier, 1978).

Appraisal is often defined as including three sequential components: primary appraisal, secondary appraisal, and reappraisal. Primary appraisal involves an initial judgment that a given situation will be harmful, beneficial, or irrelevant to the individual (Folkman, et al., 1979; Lazarus, et al., 1974); primary appraisal may also be seen as a judgment about the negative or positive meaning of an event (Rutter, 1981). Secondary appraisal involves perceptions of analyses of coping alternatives through which the potential harm deriving from a negatively appraised event can be mastered, or through which the benefits of an event appraised as

potentially positive may be achieved (Lazarus, et al., 1974). Secondary appraisal thus involves assessment of the event in terms of available coping resources and options (Folkman, et al., 1979). Reappraisal occurs when the individual responds to changing internal or external conditions (Lazarus, et al., 1974) and receives new information therefrom (Folkman, et al., 1979); these changes are themselves usually the result of coping alternatives put into action as the result of secondary appraisal.

The process of primary appraisal thus answers two questions: is the situation or event potentially threatening or demanding? And, is the event, if perceived as stressful, likely to eventuate in positive or negative consequences? Secondary appraisal follows, and answers the question: what will the individual do about the event or situation? Secondary appraisal thus identifies coping actions to be used in response to the threats or demands implicit in the stressful event. Reappraisal takes place as the individual has an opportunity to see the consequences of his or her coping actions. As these coping actions are implemented, they may alter the meaning or content of the stressful situation; they may have other consequences as well. As the individual reappraises the situation--i.e., assesses the effectiveness and impact of the coping actions implemented--new perceptions or coping responses may emerge and the appraisal process may begin again.

This coping process, grounded in appraisal and response, is dynamic. It is dynamic in part because the process itself alters the content and meaning of stressful events and influences the interplay between stress perception, assessment, and responses. It is dynamic also insofar as both the demands of stressful situations and the coping strategies of the individual generally change over time (Moos & Tsu, 1976). Further, it is dynamic in that coping frequently involves the simultaneous management

of multiple perceptions and responses (cf., White, 1974). In addition to its dynamic qualities, the process of coping is also subject to variability derived from other sources that form the context of coping. These sources of variability include personal characteristics, resources, environmental factors, and time.

Factors affecting coping

Personal characteristics. One major source of variability in coping with stressful events lies in the individual who perceives and experiences the situation. Different individuals appraise and respond to similar stressful events in different ways in part because they bring to the situation variations in several personal attributes. Among factors identified as potentially important to the coping process are "status" variables and several attitudinal or behavioral variables.

Among status variables linked to variations in coping are sex, marital status, and socioeconomic status. In some circumstances men have been observed to have more psychological resources and more effective coping strategies than women (Pearlin & Schooler, 1978). In some circumstances, too, married people and individuals from higher socioeconomic backgrounds have been found to have more resources and more effective strategies than their unmarried and lower SES counterparts (Myers, Lindenthal & Pepper, 1975; Pearlin & Schooler, 1978).

The explanatory power of these status-linked observations is likely limited, however, for there are often more significant factors playing into status characteristics. The individual's degree of integration into society, for example, has been cited as the more important variable in explaining the coping advantage of people who are married or from higher SES levels (Myers, et al., 1975). Similarly, sex per se is probably less

powerful in explaining gender-linked differences in coping than is the differential number of resources traditionally available to women (resources from family and neighborhood) and men (resources from family, neighborhood and work) (cf., Dunlop, 1981).

Two other "status" variables have been linked to coping: health and personal history. Health has been associated with variations in coping in part because it is implicated in the levels of energy that one can bring to a coping task (Folkman, et al., 1979). It has also been linked to coping in the sense that awareness of one's own fatigue levels and the maintenance of control in relation to those factors is often implicated in the adequacy of coping responses (Caplan, 1964).

Personal history is also often involved in coping responses (Cherniss, et al., 1976; Moos & Tsu, 1976; Sarason, 1980; White, 1974). It may be implicated in several ways, among them the presence of past experiences similar to present circumstances, the repertoire of potential responses developed by the individual over time, and the sense of self that an individual brings to a given stress situation. An individual with a more varied personal history may often be at an advantage in a situation that requires coping skills.

Several other personal factors, related to both attitudes and behavior, have been linked to variations in coping abilities and responses across individuals. Belief systems of the individual are often involved in coping (Folkman, et al., 1979); for example, an individual who believes that obstacles and difficulties occur for a purpose may have a much different attitude--and set of behaviors--toward a given stressful event than an individual who has little patience with difficulties.

Trust in oneself and self esteem may also be heavily implicated in coping behaviors (Caplan, 1964; Lazarus, 1976; Pearlin & Schooler,

1978; Sarason, 1980; White, 1974). Persons with higher self-esteem frequently have "better" coping behaviors, in part because they are often better able to use information appropriately (cf., White, 1974), and in part because they may have more general optimism about the probable outcomes of stressful situations. Trust in oneself also implies that an individual may be more willing to try new coping responses, to deal with a difficult situation in relatively creative ways. In a related vein, attributional style and sense of mastery are often implicated in coping response variability (Pearlin & Schooler, 1978; Rutter, 1981). If one assumes responsiblity for events and attributes their occurence to potentially controllable factors, coping responses are likely to be different than would be true if events are generally seen as attributable to luck and outside of one's control.

Janis (1974) identified still other personal characteristics of potential importance in the development of responses to stressful events. An individual's level of chronic anxiety may be a factor, as a person with high chronic anxiety is likely to perceive more events as stressful. Similarly, ego involvement and commitment to long-term behavior patterns may be involved. A person with high ego involvement in a particular situation may perceive a potential stressor as particularly threatening, while a person with lower ego involvement in the same situation may be less inclined to view the event either as important or threatening. Janis observed also that the more committed an individual is to a long-term behavior pattern, the more resistant he or she will be to change. Thus, commitment to a particular way of being may cause an individual to feel threatened by the demands for change implicit in an event perceived as stressful; a more flexible or less committed person, on the other hand, may be more open to a potential demand for change and therefore less stressed by the event.

Many of the characteristics above constitute personal resources from which the individual may draw in coping with stressful situations. As a group, however, they tend to be relatively fixed, to some extent outside of the individual's control or ability to affect rapid change, or engrained as a component of personality and personal outlook. This is not to say that they are not subject to change; with environmental support, many can be altered or directed toward new development if the individual so chooses. As a group, however, they represent a set of variables that is less amenable to change and intervention than are other person-related factors, some of which may be defined as the individual's skills and abilities.

Personal resources: skills and abilities. Two sets of skills in particular have been linked in the literature to coping abilities. The first is problem-solving skills: the ability to identify problems; search for, gather, process and apply information; and--where need be--reconceptualize problems into manageable "pieces" (Caplan, 1964; Folkman, et al., 1979; Sarason, 1980; White, 1974). The assumption here is that people with better general problem-solving skills are at a distinct advantage when faced with potentially stressful circumstances. Another set of relevant skills lies in the ability to communicate and express oneself clearly (Caplan, 1964; Cooper & Marshall, 1978). This includes the communication of needs, feelings and plans. In clear communication, it is assumed, the individual is able not only to "let off steam"--and thus gain some control over feelings--but also to identify the problem more precisely and enlist the aid of others more effectively in analyzing and responding to the situation. Communication may also imply the ability to seek help when appropriate (Caplan, 1964).

Personal resources: social network factors. Still another set of personal resources important to coping ability lies in the individual's personal social network. At a most general level, the social network is the primary social reference group from which normative modes of coping are learned (Pearlin, et al., 1981). The mere presence of a network may be helpful in coping (Folkman, et al., 1979; Lazarus, 1976; Pearlin & Schooler, 1978), although this finding is qualified by certain conditions; for example, the network optimally should offer rewarding and supportive relationships (Lazarus, 1976; Pearlin, et al., 1981) as well as some degree of autonomy (cf., White, 1974).

Of primary importance, however, is the fact that the social network is the source of support for the individual, in general and in times of stress (House, 1981; Sarason, 1980; Turner, 1981; Williams, et al., 1981). The actions offered by members of the network who constitute the individual's support system generally include different kinds of resources needed in dealing with stressful situations: information, material goods, instrumental help, and emotional support (Folkman, et al., 1979; Liem & Liem, 1978; Moos & Tsu, 1976; Sarason, 1980; White, 1974).

Although deliberate efforts to build support systems for individuals as a means of helping them cope more effectively with stress may be difficult because it is contrary to some social norms to admit that one is under stress (Kyriacou, 1981), Cassel (1976) observed that it may often be more feasible to build support than to reduce potential stressors. All in all--whether naturally existing or "built" in response to particular demands-- social networks and the support

that may be derived from them are often central to the coping responses of individuals in stressful situations.

Environmental factors. The individual's social network and her/his support system constitute a part of the personal ecology; also implicated in coping responses, however, are other aspects of the environment. Situational or environmental resources have been described as important in understanding coping (Moos & Tsu, 1976) and in shaping coping responses (Lazarus, et al., 1974). Cherniss, et al., (1976), for example, noted that different settings have different effects on the ways in which an individual copes with stress. Similarly, Lazarus (1976) observed that the "stakes" of a situation are also involved in coping responses; low stakes situations, for example, are more frequently characterized by adequate coping than are high stakes situations.

Similarly, coping responses are generally less effective in job situations than in interpersonal relations (e.g., in the family) because work settings are likely to be bureaucratically organized and to contain factors beyond the individual's control (Pearlin & Schooler, 1978). Pearlin & Schooler (1978) also suggested that "personal resources" are more important than coping strategies per se in dealing with workplace stress. Because the work environment is usually less amenable to direct action and change than are other environments, personal adaptiveness or "hardiness" gains in importance there. Also of potential relevance is the goodness of fit between an individual's coping strategies and the demands of a particular environment (Folkman, et al., 1979); the better the fit, the more effective will be the coping responses themselves.

Time. Time factors are involved in coping in several ways. First, there are different points in the coping process and coping responses may vary accordingly (Pearlin, et al., 1981), as may appropriate supportive interventions (Payne, 1980). Second, and perhaps more importantly, coping requires time if it is to be accomplished effectively (McGrath, 1970b; Rutter, 1981; White, 1974). White (1974) observed that the strategies most immediately available or most quickly selected may not necessarily be the most useful. Time is also implicated insofar as response capabilities have a cyclical quality: coping is affected by time-related variations in fatigue, satiation, mood and learning (McGrath, 1970b). Time is also implicated in the duration of any given stressor (Moos & Tsu, 1976); coping responses and their adequacy may vary in part as a function of the time span over which a stressful situation persists.

Summary: Variance in coping. There are, thus, multiple sources of variablity in coping response across individuals and within individuals across time. Major sources of variance lie in personal characteristics, personality attributes, skills and abilities, social networks and social support, environmental characteristics, and time. Variability also derives from the substance of peoples' problems (Pearlin, et al., 1981) and the nature or intensity of the stressful situations they face (Moos & Tsu, 1976).

Variance in coping must also be acknowledged in the variety of coping responses that an individual may bring to or develop in given stressful situation (Lazarus, et al., 1974; McGrath, 1970b). What "works" in one situation may not work in another, and the adequacy of an individual's coping responses in any given situation may increase if the individual is flexible and brings a relatively wide repertoire of responses

to stressful situations (Meichenbaum, et al., 1975; Pearlin & Schooler, 1978). Pearlin & Schooler (1978) again issued a caution in regard to occupationally-related coping, however, noting that varied repertoires have been found effective in some life roles (e.g., spouse, parent) but not in work roles.

Types of coping

Whatever their effectiveness across varied life roles, several types of coping have been identified in the literature. They have been defined in many terms: their temporal appearance in the stress/coping process; their intrapsychic or action orientation; their focus on action in relation to the stressor, perception of the stressor, or consequences of the stressor. Throughout consideration of these varied typologies, one observation seems to be consistently important: the individual's ways of coping--the strategies available, developed, and used--are often more significant in understanding perceptions of and responses to stress than are the absolute frequency and severity of stressful events (Lazarus & Launier, 1978).

In the temporal typology, coping may appear before, during, and after an event perceived as stressful (McGrath, 1970b; see also Pearlin & Schooler, 1978). McGrath (1970b) discussed anticipatory coping, occurring before the "fact" of stress, which focuses on preventing or avoiding the stress-inducing demand. Coping in the temporal typology may also occur after the stressful demand in an effort to "un-do" some of its conseqences. Moos & Tsu (1976) also spoke of two-phrase pattern in coping process: an acute phase, when the individual tries to minimize the impact of the stressful event, and a reorganization phase, when the individual faces

and accepts the new reality created by the interaction of the stressful event and his/her coping responses.

Typologies of coping have also been developed around direct action and intrapsychic orientations. Direct action coping generally involves efforts to deal with the sources of situations perceived as stressful (Kyriacou, 1980a; 1981; Lazarus, 1966; 1976). This may include responses intended to prevent or remove the stressor (McGrath, 1970c), modify or manipulate the situation (Lazarus, et al., 1974; Pearlin & Schooler, 1978), or alter the threat of the situation (Rutter, 1981). It may also involve preparation for the stressor (Lazarus, et al., 1974), direct response to the requirements of the situation (Moos & Tsu, 1976), and directed problem-solving in relation to the stressor (Rutter, 1981). It is important to note cautions concerning direct action coping strategies, however; Pearlin & Schooler (1978) observed that direct action strategies require recognition of the situation (its stressfulness, components, etc.) and this recognition is often difficult. Further, direct action strategies require that the situation perceived as stressful be amenable to direct action, and in some situations--notably occupational--important factors may be objectively outside of the individual's control (Kyriacou, 1981; Pearlin & Schooler, 1978).

Intrapsychic coping strategies are frequently cited as techniques that complement direct action coping responses, although they may also occur without any direct action counterpart or consequences. Rutter (1981), for example, stated that coping involves both direct action through problem-solving and the intrapsychic function of regulating emotional stress (see also Moos & Tsu, 1976). In other circumstances, however,

intrapsychic (in this case, palliative) strategies have been described as emerging if the individual's attempts at direct action are unsuccessful (Kyriacou, 1981). In still other circumstances, the use of direct action or intrapsychic strategies has been described as a matter dependent upon situational and personal characteristics (Kyriacou, 1980b),

Although intrapsychic strategies may begin--and end--with internal or cognitive actions, they may also end in overt behaviors responsive to the intrapsychic and cognitive processes. As a whole, intrapsychic responses are oriented toward dealing with the subjective experience of stress (Lazarus, 1966, 1976; Kyriacou, 1980b, 1981), and may be manifested in any one of several ways, including responding to one's own feelings (Moos & Tsu, 1976), moving to regulate emotional distress (Rutter, 1981), changing the appraisal of threat (Rutter, 1981), creating an impression of safety and security (Lazarus, et al., 1974; Meichenbaum, et al., 1975), or controlling the meaning of the situation (Pearlin & Schooler, 1978). Efforts to control the meaning of the situation, or "cognitively neutralize" it, have been described by Pearlin & Schooler (1978) as often including the substitution of rewards ("this situation may have bad aspects, but parts of it are good"), positive comparisons ("this may be difficult, but I'm better off than other people"), and selective ignoring ("the problems in this situation really aren't that important"). Still other responses in this category are more directly palliative, and function primarily as a means of controlling the effects of stress once it has emerged (Pearlin & Schooler, 1978). They include: efforts to relax, deny, or accept the situation; assumptions that the situation will pass eventually or that it is meant to be; and other efforts to make the suffering "manageable"

or minimize the discomforts involved (Pearlin & Schooler, 1978; see also Meichenbaum, et al., 1975). Overall, many intrapsychic responses tend to focus on the consequences of events perceived as stressful rather than attempting to eliminate or modify the stressful events themselves.

Coping well in general

The literature on coping--attending to sources of variance in individual coping abilities and variations in types of coping that may be employed across situations and individuals--yields some observations about "good" or effective coping in general.

First, coping well usually involves the maintenance of some sense of psychological equilibrium (Mechanic, 1974), which often includes the relief of some stressors (Lazarus, 1976). This sense of equilibrium is often prerequisite to adequate information seeking, processing, and use (White, 1974), and almost always implies also the maintenance of a sense of personal worth and rewarding relationships with others (Lazarus, 1976), throughout the stressful event(s). The maintenance of rewarding relationships with others has personal and self-esteem connotations (Lazarus, 1976), as well as implications for the ability to work with others in seeking solutions to stressful problems (Mechanic, 1974).

A second primary component of "good" coping is related to meeting the demands of the stressful situation (Lazarus, 1976; see also Mechanic, 1974). This meeting of demands implies the recognition of demands and cognitive "work" thereon (Meichenbaum, et al., 1975), the gathering of information and the use of mental rehearsal in preparing to meet the demands (Meichenbaum, et al., 1975; White, 1974), the maintenance of autonomy sufficient to allow flexibility in the choice of various strategies

(White, 1974), and, subsequently, exposure to less threatening and demanding events (Meichenbaum et al., 1975).

Overall, adequate or effective coping seems to involve (a) attention to and action (direct and intrapsychic) upon the demands of the stressor(s), (b) maintenance of a sense of self-worth and perspective, and (c) the maintenance of emotionally and instrumentally supportive relationships. Additionally, these conditions of effective coping seem best served when the individual has or can develop a relatively good repertoire of coping responses and strategies, becomes skilled in matching demands with appropriate strategies, and receives some environmental support for and feedback on the responses selected.

Coping with job-related stress

As implied in the discussion above, there are elements of occupational stress that call forth special considerations. Pearlin & Schooler (1978) were clear in their conclusion that work-related stressors present a greater challenge to coping than do stressors in other areas of life. Payne (1980), too, asserted that "psychological coping mechanisms" are of only limited use in occupational settings. The primary reason for the greater difficulty of coping in occupational settings apparently lies in the facts that (a) formal organizations are less malleable than other environments in response to individual coping strategies and (b) work-related stressors are only infrequently under the individual employee's control (see also Kyriacou, 1981). Given these observations, Pearlin & Schooler (1978) concluded that personal characteristics are more heavily implicated in coping with occupational stress than are specific coping strategies. Payne (1980), on the other hand, concluded that the difficulty

of coping in work situations highlights not the importance of personal characteristics, but the importance of social resources, mobilized to prevent and treat work-related stress. The tension between these two positions--one asserting the importance of personal characteristics and the other the importance of collective and supportive interaction as variables of primary significance in coping with work-related stress--permeates general consideration of coping with stress in teaching. That which is seen as tension between two positions, of course, may also be viewed as complementarity; that is, both personal characteristics and responses, on the one hand, and social or group interventions, on the other, may be necessary components of most individuals' attempts to cope with work-related stress.

Whatever the combination of variables that enter into an individual's coping efforts on the job, however, it seems clear that people under stress in work situations respond to the stressors they perceive and experience. Those responses may take many forms. Burke & Wier (1980) summarized the most popular recommendations for managers under stress as including a recognition of the requirements of the role and position, maintenance of perspective, maintenance of a balance between work and recreation, acceptance of personal emotional needs, and application of "sound administrative principles" on the job. Burke & Belcourt (1974) found that most managers in their sample coped by talking to others, working harder and longer, adopting engrossing non-work activities, analyzing the situation as a means to more effective problem-solving, and withdrawing physically from the job. Howard, Rechnitzer, and Cunningham (1975) found similar, frequently used categories of coping response (changing to non-work activities, talking with peers, changing methods of attacking the problem, compartmentalizing

work and non-work life and increasing physical exercise). Their subsequent analyses indicated that respondents who had the lowest psychosomatic symptoms of stress made the most use of coping strategies in the areas of improved health habits, increased exercise, and more talking with peers on the job. Still other suggestions for coping with occupational stress involve more formal organizational commitment to helping employees cope: stress innoculation training (Payne, 1980), relaxation training (Benson, 1974; Payne, 1980), and other forms of organizational programs or inservice in such varied areas as communication skills, developing support networks, participative problem-solving and decision-making, stress management and interpersonal relations (Burke & Wier, 1980). Almost all examinations of coping with occupational stress however--like examinations of coping with stress in teaching--are rendered less powerful than might be desired by extensive reliance on description and little use of theoretical models to guide intervention and systematic empirical inquiry into the effects of various coping strategies (Burke & Wier, 1980).

Even the descriptive base highlighted above permits the observation, however, that the variety of potential responses to work-related stress is great and that all draw to some extent on the characteristics of the person and situation. Variables related to the person and his or her ecology influence the perception of stress and the identification of strategies to be used in coping; similarly, variables related to the person's ecology--especially the job situation--influence the occurrence of stressors and the range of environmental resources that may be available to the individual as components of coping. In addition, some specific observations are possible: having any coping strategy is more effective

than adopting no coping stratety at all (Burke & Wier, 1980; Hall, 1972); some coping strategies are more effective than others (Howard, et al., 1975); and the effectiveness of particular coping strategies may be related to properties of particular situations (Burke & Wier, 1980).

As alluded to in some of the work cited above, one of the most common responses to stress at work--and perhaps one of the most effective--is talking to others (Burke & Belcourt, 1974; Dewe, Guest & Williams, 1979; Maslach, 1976). Although "talking things out" may go on most frequently with family and friends (Burke & Wier, 1975; Dewe, et al., 1979; Payne, 1980), there are indications that interacting with others at work may be the more important response. Caplan, et al., (1975), for example, suggested that support from others on the job is more effective in dealing with work-related stress than is support from home; Howard, et al.'s (1975) results support the suggestion. This is perhaps in part because support from others at work enables either direct address to the problem or the development of strategies designed to reduce the negative consequences of the stressors within the immediate environment.

Whatever the mechanisms involved, there is evidence to suggest that the support of co-workers, supervisees, and supervisors or leaders is an important variable in coping with work-related stress (Burke & Wier, 1980; Caplan, et al., 1975; House, 1981; Howard, et al., 1975). Payne (1980) cautioned that there are weaknesses in the literature on which this generalization is based, but concluded that social support in the workplace is nonetheless an important variable in reducing the occurrence of stressors and enabling more effective coping. This support, of course, may be related not only to psychosocial needs (emotional, cognitive and behavioral),

but may also involve material help (more resources, supplies, etc.) (Payne, 1980).

The literature on stress in teaching certainly identifies the support of colleagues and administrators as a type of coping response available to and used by educators. That literature is replete, however, with a variety of suggestions in other areas as well.

Coping with stress in teaching

As is true of writings on the sources of stress in teaching, the literature on coping in teaching seems "informal"; it is largely experiential, anecdotal, and suggestive. As a group, writers who have addressed coping with stress in teaching have offered numerous suggestions and ideas. Few of the writings, however, are based on empirical data, and those that are tend to involve survey questionnaires asking teachers what kinds of things they do to cope. In no instance among the many sources reviewed did an author examine the effects of particular coping strategies among teachers. While the descriptive work available constitutes a step in the direction of empiricism, before the actual coping responses of most teachers are understood and, more importantly, their efficacy assessed, much more systematic and well-designed inquiry is needed.

The coping responses suggested by various authors and identified in teacher surveys fall into several major categories. By far the most frequently referenced category is that which includes a variety of personal responses, most of which could be described as intrapsychic and palliative.

Personal responses

The personal responses suggested in the literature are myriad, but tend to fall into one of three categories.

Actions to ameliorate the negative consequences of stress. First and most numerous are coping suggestions related to actions in one's personal life that will ameliorate the most negative consequences of work-related stressors. These suggestions themselves fall into several areas.

First are specific actions intended largely to release or deal with the pressure generated by stressors. Most frequently mentioned are suggestions that teachers exercise more, attend to their health, adhere to a better diet, and avoid drinking, smoking and drug abuse as means of dealing with stress (Dixon, et al., 1980; Goodall & Brown, 1980; Harlin & Jerrick, 1976; Humphrey & Humphrey, 1980; Johnson, et al., 1982; Kossack & Woods, 1980; Kyriacou, 1980a, 1980b; Phillips & Lee, 1980; Rosenthal, 1976; Swick & Hanley, 1980; Truch, 1980; Weiskopf, 1980; Young, 1980). Dixon et al. (1980), and Kyriacou (1980a), presented data indicating that attention to these issues is indeed among the ways teachers cope with stress. Kyriacou (1980a), however, found that health-related responses were not among the most frequently cited coping options. Needle, et al. (1981), on the other hand, reported that teachers who engaged in more positive health practices also experienced greater general well-being; interestingly however, health practices were not as significant in well-being as was attention to changing the sources of perceived stress.

Other suggestions related to releasing the pressure of stressors focus on relaxation (Dixon et al., 1980; Kyriacou, 1980a; Maples, 1980; Pines, et al., 1981; Truch, 1980; Zahn, 1980), meditation (Goodall & Brown, 1980; Truch, 1980) journal keeping (Hendrickson, 1979), "imaging" to

change attitudes toward stressors (Truch, 1980), finding enjoyable activities outside of the job, (Gentile & McMillan, 1980; Goodall & Brown, 1980; Kyriacou, 1980a; Lowenstein, 1980; Weiskopf, 1980), providing one's own reinforcements or rewards (Pines, et al, 1981); and studying something unrelated to school (Hendrickson, 1979; Weiskopf, 1980).

The second area of suggestions aimed at ameliorating the negative consequences of work-related stressors focuses on personal actions designed to increase the amount of support available to the individual as he or she deals with the consequences of stress. Sharing feelings with a spouse (Johnson, et al., 1982; Lowenstein, 1980; Zahn, 1980), and joining a support group outside of work (Hendrickson, 1979; Kossack & Woods, 1980) are both suggested. Seeking help and support through professional counseling is also discussed (Jones & Emanuel, 1980; Kyriacou, 1980b; Phillips & Lee, 1980; Young, 1980). While this area of suggestion assumes the presence and continuation of work-related stressors, it may lead to a more active stance, involving the generation of new perspectives on stressors and ways of dealing with them more directly.

The third area of suggestion intended to ameliorate the negative consequences of work-related stressors implies that stress can be dealt with if teachers avoid circumstances that might enhance their susceptibility to stressors' negative effects. Like suggestions in the first and second area, these assume the reality and continuing presence of stressful events; unlike suggestions in the other two areas, however, they take a relatively defensive or reactive stance. This group of suggestions includes avoiding confrontations and stressful situations (Kyriacou, 1980a; Maples, 1980), avoiding depressed people (Goodall & Brown, 1980), reassuring oneself

that things will be alright (Kyriacou, 1980a), learning to "decompress" (Hendrickson, 1979; Pines, et al., 1981), and forgetting school problems once the day is over (Dixon, et al., 1980; Kyriacou, 1980a). While some of these suggestions may become part of an approach to gaining perspective on a situation, they may also form a relatively passive and non-productive response to coping with work-related stressors.

Actions related to one's experience of the job. A second category of personal responses reflected in the literature concerns personal actions related to the job or one's experience of the job. Kossack & Woods (1980), Lowenstein (1980), and Swick & Hanley (1980), for example, suggest the development of a time management or priority system for the job; prioritizing actions are also suggested as a way of minimizing role conflicts and increasing stress response capabilities (Lowenstein, 1980; Phillips & Lee, 1980; Swick & Hanley, 1980; Zahn, 1980). Personal efforts to acknowledge one's professional limits, develop more realistic expectations and goals for the job (Johnson, et al., 1982; Phillips & Lee, 1980; Zahn, 1980) or "compartmentalize" work and personal life (Pines, et al., 1981) also emerge as suggested responses to teaching stress. At a more concrete level, it has been suggested that teachers take time off, especially if they are depressed or sick in relation to job stressors (Hendrickson, 1979; Kossack & Woods, 1980; Truch, 1980). (Interestingly, Kyriacou's [1980a] survey of teachers indicated that this was the least frequently chosen of many response options.) Hendrickson (1970) also suggested taking longer leaves if necessary to cope with stress.

Actions to alter the experience of the stressor. A third category of personal responses reflected in the literature includes personal actions

intended to alter the experience of the stressor or change some aspect of the stressor itself. These include a set of very general suggestions, such as maintaining a sense of humor (Gentile & McMillan, 1980; Kyriacou, 1980a; Pines, et al., 1981; Swick & Hanley, 1980), keeping things in perspective (Kyriacou, 1980a; Phillips & Lee, 1980), developing a positive attitude toward stress, the job and its pressures (Phillips & Lee, 1980; Pines, et al., 1981), concentrating on issues in the present ("don't build bridges that won't have to be crossed") (Phillips & Lee, 1980), realizing that external factors causing stress are not one's own responsibility (Hendrickson, 1979), and that problems experienced are not caused by personal inadequacy (Swick & Hanley, 1980). The category also includes some ameliorative strategies suggested by Pearlin & Schooler (1978), such as making positive comparisons between one's own situation and that of others (Needle, et al., 1981), and being thankful for what one has (Phillips & Lee, 1980).

At a more active level in this category, several authors have suggested working to recognize the symptoms of stress (Jones & Emanuel, 1981), developing a stress management plan (Bensky, et al., 1980; Betkouski, 1981; Kyriacou, 1980a, Swick & Hanley, 1980), expressing feelings in order to problem-solve (Kyriacou, 1980a), identifying the causes of stress (Swick & Hanley, 1980; Truch, 1980), appraising and reacting to stressful situations differently (Maples, 1980), and taking specific action on stressors without procrastination (Phillips & Lee, 1980). Swick & Hanley (1980) also suggested that "knowing oneself" is a critical factor in responding effectively to stress.

As a whole, thus, personal responses to teaching stress suggested in the literature tend to assume that stressors are a real and significant part of teaching and that coping responses may include large amounts of effort intended to ameliorate their negative consequences or alter one's perception and experience of the stressors. Within this category of personal responses, however, there are also the beginnings of suggestions that personal actions directed at the stressors themselves may be appropriate.

We turn now to a series of suggestions in the literature indicating that job-related actions may be appropratie means of dealing with work-related stress. While some of the categories that follow assume the presence and continuation of identified stressors, others assume that stressors may be amenable to intervention and change. Many of the suggestions below are responsive to Farber & Miller's (1981) observation that the problem of teacher stress lies not in the individual pathology but in social-environmental factors.

Job-related responses

Preparation and information. Both preparation and adequate information are cited as coping mechanisms at several different levels. First, preparation for the "realities" of teaching receives strong support in the literature: advance knowledge of the emotional strains that teaching involves (Weiskopf, 1980; see also Mattingly, 1977), information on common teaching demands (Dunham, 1980) particularly in noninstructional areas (Purkerson, 1980), attention to the building of conformity between expectations and the realities of work (Kossack & Woods, 1980; Schmidt, 1980), and development of personal coping skills (Needle, et al., 1980), should all be improved, argue several authors. Second, preparation for stressors

(Bloch, 1977) and for strategies in organizational change (Bensky, et al., 1980; Dixon, et al., 1980) are suggested. Gathering realistic information about school (Truch, 1980), and identifying causes of stress at school are also often cited as appropriate coping responses (Bensky, et al., 1980; Betkouski, 1981; Dixon, et al., 1981; Hendrickson, 1979; Kyriacou, 1980a; Needle, et al., 1980); this may take the specific form of diagnosing environmental conditions (Dixon, et al., 1980) or anlyzing the teaching job for its "liked" and "disliked" tasks (Goodall & Brown, 1980). At the most action-oriented level of these preparatory responses, Kyriacou's (1980a) teachers suggested that appropriate coping responses involve "nipping potential sources of stress in the bud" once they have been identified and, subsequently, staying with the problem until it is resolved.

The potential importance of preparation and the development of realistic expectations is highlighted by several of Jackson's (1977) observations. Many teacher characteristics, he asserted (such as idealism, concreteness, belief in the intuitive, defensiveness and deference), evolve from two primary sources: "idealistic" training and the press of educational reality. The latter he defined by several characteristics of the teaching job, among them its fast pace, its demands for constant decision-making and attention to an extraordinary number of discrete events, its very concrete nature, the absence of opportunity for reflection, and its 'client' group of children who must be in school whether they want to be or not. These demands and many teacher beliefs--especially as the latter are developed or supported in training--imply strongly that more adequate preparation and specific training for dealing with the realities of

classroom life may be useful in helping teachers cope more adequately with potential stressors. Vance & Schlechty's (1982) work, however, cautions against placing extensive emphasis on revisions of training at the expense of attention to alteration in occupational structural variables.

Teaching behaviors and skills. Coping responses in relation to job-generated stressors have also been identified as clustering around attention to specific teaching behaviors and skills. Most frequently mentioned is the development of new, appropriate, or newly-needed teaching skills (Bensky, et al., 1980; Gentile & McMillan, 1980; Jones & Emanuel, 1981; Needle, et al., 1980; Truch, 1980). Ways of attaining this goal include attending or presenting at conferences (Gentile & McMillan, 1980; Jones & Emanuel, 1981; Weiskopf, 1980), trying out new curricula or introducing more variety into classroom content (Hendrickson, 1979; Lowenstein, 1980; Zahn, 1980), and becoming more involved in professional concerns (Jones & Emanuel, 1981). Work by Berman & McLaughlin (1980) on teacher response to selected educational innovations indicates that attention to these suggestions may be quite important; their findings led them to the conclusion that:

> teachers rise to challenges. Ambitious and demanding innovations seem more likely to elicit the commitment of teachers than routine projects. This is so in part because these projects appeal to the teachers' professionalism; that is, a primary motivation for teachers to undertake the extra work and disruption of attempting change is their belief that they will become "better" teachers and that their students will benefit. (p. 61)

Other specific behaviors and ideas enter in here also:- developing more realistic goals for teaching behavior and student performance (Weiskopf, 1980), establishing a classroom in which both students and teachers can

take pride (Swick & Hanley, 1980), delegating non-teaching tasks to others, and breaking up the amount of continuous contact with children (Weiskopf, 1980). Team-teaching is also suggested (Swick & Hanley, 1980). At a very generalized level, several other suggestions emerge: remembering the ideals and goals for which one entered teaching (Hendrickson, 1979), working to increase professional self-esteem and satisfaction from teaching (Cardinell, 1980; Jones & Emanuel, 1981), and developing more creativity on the job (Weiskopf, 1980). Finally, a pair of responses suggested by the teachers in Kyriacou's (1980a) survey suggest simply working harder in the teaching job and ensuring that other people know that "you're doing your best."

Student-based interventions. Given the frequency with which student-related concerns are mentioned as sources of stress in teaching, it is interesting that student-involved responses are almost completely absent in the literature. Only Truch (1980) indicated that coping responses might involve students directly when he suggested that teachers share their feelings with students and colleagues as one means of increasing satisfaction with teaching. He added that because students also experience stress, teachers might well include elements of stress reduction and coping in their curriculum.

Collegial interaction. Kyriacou (1981) observed that the support of colleagues may underlie both palliative and direct action coping responses, and a number of coping suggestions include interactions with coworkers directed to either of these ends. Increased communication between teachers, particularly of a professional nature, is mentioned frequently (Dunham, 1980; Jones & Emanuel, 1981; Weiskopf, 1980); it is

suggested in part as a means of avoiding isolation (Weiskopf, 1980) but also as a way of providing an opportunity to talk about stress-related problems with other teachers (Dunham, 1980; Jones & Emanuel, 1981; Zahn, 1980). Farber & Miller (1981), however, cautioned that communicating for the sole purpose of catharsis may create only the illusion of benefits. Teachers in Kyriacou's (1980a) survey perhaps reflected this concern--or the oft-cited prevalence of isolation in teaching--in ranking "talking with others at work" and "getting advice from others at work" in or near the bottom third of a long list of possible coping responses. Nonetheless, creating support systems at work is cited by a number of authors as important in effective coping among teachers (Hendrickson, 1979; Johnson, et al.,1982; Jones & Emanuel, 1981; Kyriacou, 1980b; Mattingly, 1977; Needle, et al., 1980, Swick & Hanley, 1980), as is sharing feelings with colleagues (Mattingly, 1977; Truch, 1980). Other authors cite specific mechanisms for increasing collegial support, such as coordinating plans with those of colleagues (Rubel, 1978), and going on retreats or planning social events with colleagues (Hendrickson, 1979; Young, 1980).

Interestingly, there is evidence that strong and productive collegial interactions are associated also with the effectiveness of schools. While relationships between levels of teacher stress and teacher or school effectiveness have not been subjected to systematic empirical investigation, the weight of logic and related evidence would imply a negative correlation between high levels of teacher stress and overall school effectiveness. Thus, while some teachers have cited improved collegial relationships as important in coping with stress on the job, Purkey & Smith (in press) identifed effective schools as characterized by low levels of isolation

and relatively high levels of collegial interaction, collaborative work, and sharing of ideas for innovation, experimentation and evaluation in teaching. Similarly, Little (1982) found successful schools characterized by teachers who value and participate in varied forms of collegial interaction about professional concerns, educational experimentation, and improvement of teaching. Rosenholtz (1982), reviewing these findings, noted that the characteristics described by Little reflect Lortie's (1969) description of "incipient professionalism," when isolation as a predominant characteristic of the group is replaced by the development of collegial ties. It seems likely that productive collegial interaction may be not only a useful response to stressors in teaching but may itself reduce the number and "intractibility" of stressors in teaching and increase the probability of teaching effectiveness. That the area is in need of much more clarification, however, is highlighted by findings such as Bishop's (1977), for example, indicating that the presence or absence of isolation from colleagues has little to do with teacher satisfaction and Lortie's (1969) relatively long-standing suggestion that teachers may prefer isolation.

Collective actions. Although mentioned rarely in this body of literature, collective actions as a means of addressing stress emerge in the writing of Needle, et al. (1980). Specifying the use of professional associations and unions, Needle, et al. suggested that several issues beyond the reach of individual efforts might be addressed collectively, e.g., class size, adequate inservice opportunities, professional recognition, salary increases and job security. They also suggested that colleges and inservice organizers should address the development of skills in collective action.

School-based interventions. While most of the suggestions above concern steps an individual teacher might take within his or her own job planning and actions, this category of coping responses implies cooperation between teachers and administrators to improve school based possibilities for coping with stress. First, the introduction of in-service courses is suggested, with reference either to general topics (Hendrickson, 1979, Rubel, 1978) or stress management and burnout in particular (Betkouski, 1981; Needle, et al., 1980; Sparks & Ingram, 1979; Swick & Hanley, 1980; Young, 1980). Other school-based suggestions focus on establishing conferences related to student and teacher needs (Farber & Miller, 1981; Olander & Farrell, 1970), and creating crisis intervention teams to work with teachers in stress (Bloch, 1977). Working to create more team-teaching possibilities is also suggested (Farber & Miller, 1981; Hendrickson, 1979; Swick & Hanley, 1980). Centra & Potter (1980), however, observed that team teaching is not more effective than solitary teaching in regard to student outcomes, implying a need to think careful about the components and implementation of team teaching if it is to be used as one means of helping teachers cope with stress. A final set of suggestions in this area noted the usefulness of better working conditions (Pines, et al., 1981; Truch, 1980) and more "pleasantness" (Maples, 1980) or variety in the school setting, the latter with specific reference to grade levels taught (Hendrickson, 1979) or daily routines (Farber & Miller, 1981).

Administrative interventions and supports. Perhaps more than any other job-related response to stress, gaining the support of administrators is cited as a most significant means of coping with stress in teaching (Bloch, 1977; Dixon, et al., 1980; Dunham, 1980; Kyriacou, 1980b; 1981;

Rubel, 1978; Schmidt, 1980; Truch, 1980; Weiskopf, 1980). The support and assistance of administration may be critical insofar as macrolevel decisions are concerned, for example, the creation of smaller classes (Pines, et al., 1981) and schools (Cherniss, et al., 1976), or the establishment of cooperatively organized schools, which seem to facilitate work-related collegial interaction (Bishop, 1977). Administrative support may also be critical in relation to more specific teacher needs, such as the need for breaks in routine and variety in work responsibilities (Mattingly, 1977; Pines, et al., 1981), clearer role expectations (Dunham, 1980) or help in dealing with overload (Bensky, et al., 1980; Cherniss, et al., 1976; Olander & Farrell, 1970). Simply improving communications between teachers and administrators is suggested as helpful (Cardinell, 1980; Dunham, 1980; Olander & Farrell, 1970), as are feedback, encouragement, and constructive criticism (Olander & Farrell, 1970; Pines, et al., 1981). Perhaps even more important is the development of a participatory community within the administrative structure of the school (Farber & Miller, 1981), one that encourages collaboration (Reppucci, 1973), collective coping interventions (Needle, et al., 1980), and participation in decision-making (Dunham, 1980; Schmidt, 1980). Finally the administrative support that is offered by school leaders who focus on "guiding ideas" in education has been cited as helpful (Reppucci, 1973).

Related literature is again helpful here, for issues concerning administrative actions, styles and support all enter into the creation of successful school environments. At a most basic level, administrative intervention is important because many teachers value positive relationships with supervisors (Chapman & Hutcheson, 1982; see also Jackson, 1977). In terms of specific practices, several suggestions emerge.

Opportunities for participation in decision-making, for example, have been related to increased feelings of efficacy (House, 1974) and teacher safisfaction (Alutto & Velasco, 1972; Cohen, 1981, Conway, 1976). Rosenholtz (1982) linked cooperative organization in schools--as contrasted to traditional, self-contained unit organization--to greater classroom effectiveness. Fruth, et al. (1982) identified leader support, leader rewards to individual teachers, and the creation of a generally "nourishing environment" as the most significant variables in increasing teacher longevity and effectiveness in the profession. Leithwood & Montgomery (1982) also underlined the importance of good leadership in characterizing effective principals as individuals who have a strong sense of purpose, define priorities, gain support for them and "intervene directly and constantly to ensure that priorities are achieved" (p. 335). A caution may be inferred here in the work of Dillman (1964), however, who reported finding fairly strong differences between teacher and administrator priorities, differences implying a need for commitment to communication and consensus on priorities if administrator support is to be effective (see also Chussil, 1971).

At a level extending beyond school-based considerations, Hawley (1974) identified several propositions emerging from the literature on organizations, all offering support for the efficacy of specific administrative practices mentioned in the literature on coping with stress in teaching. For example, job situations offering greater opportunities for growth, personal control and autonomy based on competence are associated with greater job satisfaction; participation in decision-making considered important by the individual is related to greater job satisfaction; participation and power-sharing are linked with greater commitment to organizational goal attainment; opportunities for interaction with coworkers

increase job satisfaction; and if the interaction is related to organizational goals, it is also related to increased productivity.

Thus, work in several areas--suggestions growing out to teachers' efforts to cope effectively with the negative impacts of stress; empirical examinations of school and teacher effectiveness; and a body of empirical and theoretical work on organizations--all point to a power of organizational and administrative variables to improve the environment within which teachers work and reduce the occurence of stressors and their negative impacts.

An important cautionary note relevant to administrative issues was suggested by Terborg & Komocar (1981), however, who observed that schools as organizations are themselves under stress. Burke & Wier (1980), referencing work by Hermann (1963), suggested that organizations in crisis or severe stress exhibit several characteristics, among them: employee withdrawal behavior, intensification of conflicts within the organization, contraction of authority to less participatory and more hierarchical structures; reduction in communication channels, and increased conflict among those in authority. Eventually, these behaviors "detract from the effectiveness of the organization's response to the crisis" (p. 315) and simultaneously increase the dissatisfaction of the organization members. Hall & Mansfield's(1971)study of employee response to crisis in three research and development organizations supported Hermann's suggestions. They found that employees in organizations in crisis reported lowered opportunities for rewarding experiences, increased tendency to protect their own work, decreased identification with the organization, and decreased cohesion within the work group. Burke & Wier (1980) suggested that more effective coping in the context of organizational crisis involves maintaining channels of communication, developing more supportive relationships, focusing on problem-solving while keeping emotional reactivity as low as possible,

increasing cooperative and participative decision-making and problem-solving, and providing strong leadership with the capacity to generate alternative solutions to the problems facing the organization. The suggestions for improved coping would seem most important, but unfortunately, all the more difficult of attainment because they are the behaviors most threatened and the steps rendered most unlikely by crisis. Administrative interventions may be critical in helping teachers cope with stress, but are themselves possible perhaps only with great care in planning and implementation.

Stress compensation. The remaining and small category of job-related responses to teaching stress is apparently based on the assumption that the stressors teachers face are beyond direct address or normal coping strategies and compensation for damage is therefore appropriate. Bloch (1977) suggested hazard pay for teachers in schools where violence pertains and Young (1980) included stress disability insurance in suggested plans for dealing with stress in teaching.

Community-based responses

A final general category of responses to stress in teaching--also small--is related to the involvement of the community in teachers' coping. Improved communication with parents and the public in general have both been suggested as viable means of coping with stress (Cardinell, 1980; Dunham, 1980; Farber & Miller, 1981), as has active involvement between school and community (Reppucci, 1973). Overall, factors in the community--although often cited as sources of stress--receive only cursory attention as sources of coping with stress.

Summary

Although predominantly suggestive in nature, the literature on coping with stress in teaching is thus rich in number and type of strategies offered. By far the most frequently cited category of coping response is personal action designed to change the individual's perception or experience of the stressors in some way. The attention given to this category of response is perhaps reflective of general findings on occupational stress (e.g.,Pearlin & Schooler, 1978) implying that personal response is the most effective or feasible approach to coping with stress at work. The attention to personal responses, however, may also grow out of an inability or unwillingness to consider an environmental or structural address to coping, or a ready willingness to assume that responsibility for the experience of stress lies in the individual rather than the individual-environment transaction.

While personal responses are most frequently mentioned, several job-related coping strategies also appear in this literature. Some of these job-related strategies--particularly in the areas of teacher preparation, collegial interaction, and administrative intervention--connect well with literature in teaching effectiveness and satisfaction. Although there is virtually no sound empirical literature on the effectiveness of various coping strategies used specifically by teachers under stress, the related literatures here provide intriguing support for the probable efficacy of some of the job-related coping strategies suggested.

Very few coping strategies based either in the family/personal network or community levels of the ecology are suggested as useful in coping with stress in teaching. The paucity of suggestions here may reflect, in the case of the family and personal network, a wish to separate personal and work life, or an awareness of the general occupational finding that

personal networks are of limited help in coping with job stress. The absence of attention to community-based coping strategies may reflect the alienation of teachers and schools from their communities or a belief that community-based stressors and resources are too large to be addressed by teachers, individually or collectively.

Whatever the category of coping response mentioned in this literature, however, a factor of major importance lies in the finding that suggestions for coping--individually or as a group--have not been subjected to systematic design or evaluation of effectiveness. Just as the consequences of stress in teaching are still largely a matter of conjecture, so too is the efficacy of various approaches to coping with stress in teaching.

Conclusions and reflections

The body of work reviewed in this paper permits many observations, the specific direction of each awaiting only the specific interests of teachers, researchers, parents, administrators, or policy analysts concerned with stress in teaching. We have elected in this concluding section to highlight observations that seem most important to us, allowing others to return to the body of the paper for information and analyses applicable to specific questions.

A primary observation growing out of this review is the need for systematic empirical inquiry—well-grounded in theory and prior relevant research--into the sources of stress and coping in teaching. This examination should focus particular attention on the effects of various stressors and coping responses on teachers and students. This need is indicated also by the summary observations of others who have examined the field. Farber & Miller (1981) and Phillips & Lee (1980) suggested that despite substantial amounts of discussion about stress in teaching,

we still have little direct information about the kinds or amounts of stress experienced by most teachers. Of equal importance, we know very little about the ways in which the experience of stress actually affects teacher performance or educational outcomes (Cichon & Koff, 1980; Tosi & Tosi, 1970), in the short run or over time. Similarly, only a few have turned empirical attention to coping with stress in teaching, and fewer still have analyzed systematic attempts to intervene in the stress process with an eye to supporting effective coping strategies.

This recommendation reflects more than the familiar and sometimes obligatory call for more research. Judging from the numerous accounts of events and conditions in teaching labelled "stressful," we have a problem of some magnitude in the field. Because so few have addressed the problem systematically and scientifically, however, we do not have a strong body of specific information about the sources, prevalence, and consequences of either stress or coping in relation to individual teachers, groups of teachers, or the schools within which they work. This information must be derived if the problem as generally identified is to be specified and addressed effectively.

Answers to these questions must be developed, for the quality of education--so frequently discussed by persons of all political persuasions--is dependent in large part on teacher quality and effectiveness (Fisher, Berliner, Philby, Marliave, Cahan, Dishaw, & Moore, 1978). The latter, if we may generalize from related theory, empiricism, and the anecdotal literature that abounds, seem linked on logical grounds if no others to the occurrence and consequences of stress in teaching. We know that high levels of occupational stress are related for example, to physiological illness, emotional tension, chronic anxiety, and depression. We

also know that occupational stress is linked to several negative manifestations of work behavior, such as absenteeism, low productivity, low effectiveness, low self-esteem, low satisfaction, and withdrawal. Thus, not only are the lives and personal well-being of teachers implicated in the stress and coping issues discussed here, but also--and perhaps more importantly from a policy perspective--the quality of teachers' work, and thus the quality of education, are implicated.

Given these circumstances, it is curious indeed that so little attention and so few resources have been given over to the systematic examination of the causes, consequences and "cures" of stress and coping in teaching. This situation may have evolved for several reasons, among them the relatively low status of teaching as a profession (compare the work on stress in teaching, for example, with work on stress in management), or the perception that teaching is "women's work" and thus less worthy of attention than more male-dominant professions. The fact that the primary "clients" in teaching are children--usually not in a position to advocate effectively for themselves or the importance of work done with them--may also be a factor. So, too, may be the perception that there is an ample supply of teachers (What is lost, then, if one teacher leaves? Another can be hired to fill the slot) or that teaching, like many "women's jobs," is an occupation where individual employees may come and go without significant loss either to the organization or its clients. Certainly some structural factors and practices in teaching lend support to such perceptions (e.g., regular reassignment of teachers and students; the absence of career path; the lack of significant rewards attached to demonstrated competence). It may be, too, that teaching is considered by many

outside of the field to be an "easy" job, and that good teachers (or ones worth keeping) ought to be able to cope adequately with some of its less desirable aspects. Whatever the sources of reluctance to examine stress and coping in teaching, it is clear the continued absence of theoretically based and scientifically sound investigation into the issue will impede accurate assessment of the situation and the design of effective approaches for its improvement where needed.

Assuming a commitment to examine the issue systematically, investigations should begin with a theory-based approach to the definition of stress. Of the few empirical investigations in the field now, too many have assumed an atheoretical approach to the assessment of stressors and the stressfulness of events in teaching. Moving from the apparent assumption that "stress" is potentially an accoutrement of all job conditions and tasks in teaching, many authors have equated a mixture of difficult or unpleasant conditions with stress. This identification of multiple negative events as stressful has done little to aid those who would define the problem in the service of crafting solutions, for it has seemed at times merely to create the impression that there is a problem so diffuse as to defy meaningful address.

The elements of stress as defined early in this review--change, a perception of threat, and response to perceived threat--appear to offer a significant beginning for definition of the phenomena to be examined. Similarly, direct reference to the broader body of work in occupational stress is warranted in defining particular stressors that may be salient in teaching (as did Pettegrew and Wolf, [1982], for example). Optimally, the definitional work, based in existing theory and empiricism, will allow the inclusion and exclusion of specific events, producing a more focused

investigation of stressor events and consequences than has heretofore been the case.

A more focused definition of stress is also needed to correct a prevalent but misleading assumption that all problems in teaching--particularly those related to teacher "burnout" or decisions to leave the profession--are the natural consequences of, and only of, stress. Many negatively perceived aspects of the daily rounds of teaching may in fact constitute stressors; they may also be more readily understood as problems inhering in the structure of the occupation, however, that warrant attention independent of the extent to which they produce stress. Thus, some teachers may leave the profession not primarily because they experience extreme stress on the job, but rather because the "quality of life" (cf. Schelechty & Vance, 1981) offered by the job becomes less attractive over time or less compelling in the face of other, equally or more prestigious and financially rewarding opportunities. Similarly, patterns of adult development, interacting with other life responsibilities and conditions of employment, may be more powerful in explaining decisions to leave the profession than are stressors (defined by patterns of change, threat, and response) commonly present in many teaching jobs. This argument is not to downplay the importance of stress in teaching: it is to assert that there are issues in the profession in need of attention independent of their "stress-producing" potential if improvement in the quality of teachers, teaching, and education is a goal seriously sought.

Just as all negative conditions in teaching cannot properly be defined as stressors for all teachers, so too is it inappropriate to make general and linear assumptions that a particular class of events, if perceived as stressful by some teachers, will be perceived as stressful by all teachers. If general work in the area of stress and coping point to

some clear conclusions, surely one of the most important is that stress must be understood theoretically as a transactional phenomenon, subject to variability among and within individuals and their ecologies, over time.

To assert the presence and significance of heterogeneity of situation and response among teachers, however, is not to deny the importance of examining the experiences and responses of teachers in general. Such investigations are clearly warranted and--if theoretically based and well-designed--will contribute to the development of more appropriate individual and systemic responses to teaching stress. They must be tempered with the understanding, however, that teachers' experiences, needs, and responses may vary extensively as a function of several "person-factors" (individual history, personal-social network, and stage of development, to name but a few that are potentially significant). The study of teachers as a group, thus, must be undertaken with concurrent attention to variability of individuals within the group on factors of potential relevance to either stress perception or coping response.

In the area of coping, as is true in the area of stress, there is a strong need to base both research and intervention firmly in the area of "what is known." At this point in time, the broader body of literature on coping permits movement beyond atheoretical and descriptive accounts. We know, for example, that "good" coping generally involves direct and intrapsychic action upon the demands of the stressor, the maintenance of a sense of self-worth, and the maintenance of emotionally and instrumentally supportive relationships. Surely within the confines of even these broad observations can be developed an analytic framework through which to assess the nature and adequacy of teachers' coping responses. Similarly, these basic guidelines may be used to shape theoretically and empirically sound intervention design in teacher stress and coping.

Just as an ecological orientation is warranted in the area of teacher stress, so too is it needed when coping is considered. In a transactional sense, the issue of coping in the workplace is best seen as the creation of a more adequate and productive person-environment fit, consisting of personal and systemic efforts to increase the accommodation, satisfaction, and effectiveness of each party in the relationship.

Intervention efforts, be they oriented toward personal response (e.g., stress management) and/or situational action (e.g., alterations in some element of the school environment) should be oriented, from this perspective, toward the creation of a wide range of coping options. Thus will variability between individuals be respected and the probability of successful coping increased. Similarly, the transactional perspective in coping implies a need to attend simultaneously to multiple elements of the situation; attention to reform in only one area of a "problem," without attention to equally significant elements of the equation, may produce but a fraction (or none) of the intended general effect.

In the planning of interventions to reduce stressors in teaching or enhance teachers' coping skills, several implications derived from an ecological perspective come to the fore. First, there is a need to examine and prioritize among identified stressors for any defined group of teachers, for--assuming finite resources of time, energy, and money--intervention efforts should clearly begin with the most important in terms of impact and/or frequency of experience.

Second, there is a need to examine individual elements of the teaching situation identified as stressful with reference to the susceptibility of each to change. "Endemic uncertainty," for example, has been identified

as an element of teaching (Lortie, 1975) that might well increase teachers' perceptions of some school-related events as stressful; it refers to an inability to know with assurance that one's teaching--as opposed to family factors, student ability or peer influence, for example--is the most significant variable in student learning. However important endemic uncertainty might be, it would appear less amenable to change than, for example, alterations in principals' practices regarding teacher participation in building-level decision-making. Thus, selection of stressors as targets for intervention should take into account not only their significance, but also the potential for effecting change in the particular area.

Third, intervention efforts should focus on the development of coping strategies that are most likely to be effective. The coping literature, for example, indicates clearly that the support of co-workers is implicated in successful response to occupational stress. Efforts to improve coping among teachers should concentrate in this and other such areas of probable high impact and leave areas of lesser importance or more questionable outcome to a time when the "fine-tuning" of coping responses may be more appropriate.

Finally, the development of interventions to reduce teaching stressors and improve coping responses must take place with an understanding of the scope and impact of the change potentially required by such efforts. In the best of times, change in bureaucratic organizations such as schools is difficult (Blumberg, 1980; Hawley, 1975; Sarason, 1971), and it might well be said that these are not the best of times. It has also been observed, however, that schools are constantly subjected to demands for alteration (Abbott, 1975; Chesler, Crowfoot & Bryant, 1980), and that

conflicted occasions represent opportunities for the introduction of desired change (Chesler, et. al., 1980).

Whatever the dynamic involved, systematic address to the problems of teacher stress will require the introduction of intentional change. This implies that attention be paid to the body of literature giving guidance on how best to accomplish change within school settings. For example, several aspects of the teaching situation have been identified as significant in effecting change: selected teacher characteristics; relations among teachers; leadership; and institutional motivation (Berman & McLaughlin, 1980; McLaughlin & Marsh, 1978). Some kinds of change are easier to introduce and accomplish than others (Chesler, et al., 1980), and effective change requires attention to the development of implementation strategies (Chesler, et al., 1980; McLaughlin & Marsh, 1978); for example, identifying which existing procedures may be utilized in the change process and inventing new structures as necessary (Miller & Wolfe, 1978). While these ideas are necessarily only suggestive in the present context, they indicate the importance of attending conscientiously and systematically to the available literature that offers guidance to efforts aimed at reducing stressors in the school and improving the coping skills of teachers.

Ultimately, the success of intervention efforts in teacher stress will be measured by improvements in the quality of educational processes offered to students and the quality of student learning. From a policy perspective, the justification for attention to teacher stress lies in the linkage between the assertion that reductions in teaching stress and improvements in teachers' coping skills will improve the quality of education and the quality of student learning. Work to date in teacher stress and related areas of educational inquiry, as well as inferences

that may be drawn by logic alone, suggest the functional presence of such linkages but--because of theoretical and empirical limitations in the teacher stress literature as a whole--they do not yet permit conclusive statements.

It is time for educators to avail themselves more fully of theory and empiricism in related disciplines and continue movement from the existing base of suggestion to the derivation of more scientifically sound knowledge of stress and coping in teaching. The major consequences of such an effort can be little other than an improved understanding of productive interactions between teachers , students, and the schools within which they work.

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